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ABSTRACT

This study is based on data collected in the first through fourth stages of a 5-year longitudinal study of 5,225 young men in the national civilian noninstitutional population who were 14 to 24 years of age at the time of the initial (Autumn 1966) interview. The purpose of this progress report is to describe the magnitudes and patterns of change in personal characteristics and in educational and labor market status that have occurred during the three years between the initial and fourth surveys and between the second and fourth surveys. Analysis of 1969 interview data from approximately 75 percent of the original sample suggest that: (1) high school graduates and dropouts can be distinguished by behavioral, experiential, and attitudinal differences, (2) interfirm movement (change in employer) by out-of-school youth declined sharply with increasing job tenure, (3) a substantial amount of occupational movement occurred among out-of-school youth, (4) a substantial residue of unreality is exhibited in the young men's occupational aspirations, (5) patterns of change reflect the occupational progress expected as careers unfold, (6) instability of educational and occupational goals were exhibited, and (7) the socioeconomic gap between black and white youth was wider in 1969 than when these men first left school. Volumes 2 and 3 are available as ED 047 104 and ED 054 336, respectively. (SB)

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Career Thresholds:

A longitudinal study of the educational and labor market experience of male youth

Andrew I. Kohen
with the assistance of
Paul Andrisani

Volume four
January 1973

Center for Human
Resource Research
The Ohio State University
Columbus, Ohio

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CAREER THRESHOLDS:

A longitudinal study of the educational and labor market experience of male youth

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VOLUME FOUR
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FOREWORD

In early 1965, the Office of Manpower Policy, Evaluation and Research (now the Office of Policy, Evaluation and Research of the Manpower Administration) of the U.S. Department of Labor contracted with the Center for Human Resource Research of The Ohio State University for a five-year longitudinal study of the labor market experience of four groups of the United States population: men 45 to 59 years of age, women 30 to 44, and young men and women 14 to 24.

Cost consideration dictated limiting the population covered; given that constraint, these four groups were selected for study because each faces special labor market problems that are challenging to policy makers. In the case of the older male group these problems are reflected in a tendency for unemployment, when it occurs, to be of longer-than-average duration and in the fact that average annual incomes of males decline continuously with advancing age beyond the mid-forties. In the case of the older of the two groups of women the special problems are those associated with reentry into the labor force on the part of a great many married women after their children no longer require their continuous presence at home. For the young men and women, of course, the problems are those revolving around the process of occupational choice and include both the preparation for work and the frequently difficult period of accommodation to the labor market when formal schooling has been completed.

While the more-or-less unique problems of each of the subject groups to some extent dictate separate orientations for the four studies, there is, nevertheless, a general conceptual framework and a general set of objectives common to all of them. Each of the four studies views the experience and behavior of individuals in the labor markets as resulting from an interaction between the characteristics of the environment and a variety of demographic, economic, social, and attitudinal characteristics of the individual. Each study seeks to identify those characteristics that appear to be most important in explaining variations in several important facets of labor market experience: labor force participation, unemployment experience, and various types of labor mobility. Knowledge of this kind may be expected to make an important contribution to our understanding of the way in which labor markets operate and thus to be useful for the development and implementation of appropriate labor market policies.

For each of the four population groups described above, a national probability sample of the noninstitutional civilian population has been drawn by the Bureau of the Census. Members of each sample have been surveyed periodically over a five-year period. This report, the fourth in the series on the younger group of men, summarizes some of the data produced by the fourth round of interviews conducted in the Autumn of

1969. Based mainly on tabular data, it is intended primarily as a progress report on the longitudinal study, focusing on the magnitude and patterns of change in the educational and labor market status of the young men during the period between the 1966 and 1969 interviews. More intensive multivariate analysis of the data is under way and will be available at a later date, but the unique nature of some of the data already available has argued for its immediate publication.

Herbert S. Parnes
Project Director
January 1973

ACKNOWLEDGMENTS

Both the overall study and the present report are products of the joint effort of a great many persons, not all of whom are even known to us. The Research staff of the Center has enjoyed the continuous expert and friendly collaboration of personnel of the Bureau of the Census, which, under a separate contract with the Department of Labor, is responsible for developing the samples, conducting all of the interviews, processing the data, and preparing the tabulations we have requested.

We are indebted to Earle Gerson, Chief of the Demographic Surveys Division, and to his predecessor, Daniel Levine; to Robert Mangold, Chief of the Longitudinal Surveys Branch, and to his predecessor, Marie Argana; and to Dorothy Koger of the Demographic Surveys Division. These are the individuals who in the recent past have been our liaison with the Census Bureau. We also wish to acknowledge our indebtedness to James Johnson and the staff of the Field Division who were responsible for the data collection; to David Lipscomb and his staff for editing and coding the interview schedule; and to Richard Bartlett, James Matthews and their associates for the computer work.

The advice and counsel of many persons in the Department of Labor have been very helpful to us both in designing the study and in interpreting its findings. Without in any way implicating them in whatever deficiencies may exist in this report, we wish to acknowledge especially the continuous interest and support of Howard Rosen, Director of the Office of Research and Development of the Manpower Administration, and the valuable advice provided by Stuart Garfinkle and Jacob Schiffman, who, as our principal contacts in the Office of Research and Development, have worked closely with us from the outset.

We also wish to acknowledge the contributions of other members of the Center's staff. Herbert Parnes, Director of the Project, provided us with his always valuable insights and reactions. Other colleagues who gave us the benefit of their reactions to an earlier version of the manuscript are James Murphy, Edward O'Boyle, Roger Roderick and John Shea. Robert Smallwood, Jane Paiement and Constantine Karmas made major contributions to preparation of the tables. Ellen Mumma and Regina Parks were responsible for checking the manuscript and for maintaining the necessary liaison with the Census Bureau. Finally, we wish to thank Dortha Gilbert and Kandy Bell for typing this and earlier versions of the manuscript.

Andrew I. Kohen
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Center for Human Resource Research
The Ohio State University
January 1973

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CHAPTER ONE*

INTRODUCTION

I INTRODUCTION

This report examines the school and work experience between 1966 and 1969 of the cohort of young men who were in their teens and early twenties at the beginning of the period. The educational and labor market experiences of young men are characterized by considerable diversity and volatility. During the three-year period under examination large contingents of youth discontinued formal schooling, changed employers, changed occupations, and revised their occupational and/or educational goals. In many respects youth whose experiences were typified by extensive movement are systematically different from those whose experiences were stable. This report describes the degree and character of the changes that occurred and attempts to identify some of the correlates of change.

The study is based on data collected in the first through fourth stages of a five-year longitudinal study of the cohort of young men in the national civilian noninstitutional population who were 14 to 24 years of age at the time of the initial (Autumn 1966) interview.[1] The results of the first three surveys have been reported in the three earlier volumes of the series.[2] The present document is intended as a

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* This chapter was written by Andrew I. Kohen.

1 For a description of the sample design, see Appendix C.

2 Herbert S. Parnes, Robert C. Miljus, Ruth A. Spitz, and Associates, Career Thresholds: A longitudinal study of the educational and labor market experience of male youth, vol. 1, U.S. Department of Labor, Manpower Research Monograph no. 16 (Washington: U.S. Government Printing Office, 1970); Frederick A. Zeller, John R. Shea, Andrew I. Kohen, and Jack A. Meyer, Career Thresholds: A longitudinal study of the educational and labor market experience of male youth, vol. 2, U.S. Department of Labor, Manpower Research Monograph no. 16 (Washington: U.S. Government Printing Office, 1971); Andrew I. Kohen and Herbert S. Parnes, Career Thresholds: A longitudinal study of the educational and labor market experience of male youth, vol. 3, U.S. Department of Labor, Manpower Research Monograph no. 16 (Washington: U.S. Government Printing Office, 1971).

further progress report on the longitudinal study. Its main purpose is simply to describe the magnitudes and patterns of change that have occurred during the three years between the initial and fourth surveys, along with some of those changes which occurred between the second and fourth surveys. In addition, however, there is more intensive analysis of particular types of change among selected subsets of the population.

The remainder of this chapter deals briefly with the following topics: changes in the size and composition of the sample of young men, a description of movement into and out of the formal school system, a description of the pattern of marital status changes over three years, a description of the extent of geographic movement during the three-year period, and a brief description of change in the external economic environment during the relevant time period(s). Chapter Two addresses many frequently asked questions about the comparative labor market experiences of high school dropouts and high school graduates who do not attend college. Profiles of the dropout and graduate are developed to exhibit the way in which the groups differ in other (than amount of schooling) characteristics which are associated with differential labor market behavior. Controlling simultaneously for number of years of school completed and length of time since last enrolled, longitudinal patterns of job changes, geographic movement, annual employment experience, earnings, etc. are examined.

Chapter Three analyzes a number of aspects of the labor market experiences of a group of out-of-school youth--i.e., those who have not been enrolled in school since the surveys began. The chapter examines the group's movement among jobs and its earnings record, as well as the changes that have occurred in its occupational aspirations. Chapter Four focuses on young men who have been students throughout the life of the survey, examining the changes in their educational goals and occupational aspirations as well as their labor force and employment status at each of the survey dates. Chapter Five summarizes briefly the major findings.

II ATTRITION

Of the 5,225 members of the sample interviewed in 1966, 4,033 were reinterviewed in 1969. The sample has thus diminished by about one-fourth (21.5 percent of the whites and 27.1 percent of the blacks) (Table 1.1).[3] As has been noted in previous reports, this proportion

---

3 In this report the term "blacks" refers exclusively to Negroes; "whites" refers to Caucasians. This terminology is the same as that used in the third volume in this series, but different from that used in the first two volumes in which "blacks" referred to the group now shown in U.S. Government reports as "Negro and other races."

Table 1.1 Interview Status 1969, by Interview Status 1967 and 1968 and Color: Male Youth 14 to 24 Years of Age in 1966

(Percentage distribution)

Interview status 1969, 1968 and 1967	WHITES		BLACKS	
	Percent of total	Percent of subtotal	Percent of total	Percent of subtotal
Interviewed 1969	78	100	73	100
Interviewed 1967 and 1968	74	94	66	90
Not interviewed 1967, 1968 or both	4	6	7	10
Not interviewed 1969	22	100	27	100
Interviewed 1967 and 1968	8	39	12	45
Interviewed 1967 or 1968, but not both	9	37	9	34
Not interviewed 1967 and 1968	5	24	6	21
Total percent	100	-	100	-
Total number (thousands)	14,046	-	1,919	-

considerably overstates the error involved in using the sample to represent the national civilian population of men 17 to 27 years of age in 1969 because about three-fifths of the noninterviewees had entered the armed forces.[4] About 4 percent of the initial sample refused (by 1969) to continue their participation in the survey, another 3 percent could not be located by Census interviewers, and an additional 2 percent were not interviewed for other reasons.[5]

As has been pointed out in earlier volumes, the likelihood of dropping out of the sample for each of the several reasons mentioned above varies systematically according to a number of characteristics of the young men. Irrespective of color, young men who were students in 1966 were more likely than those who were not enrolled in school to have dropped from the sample as of 1969. Though this is a reversal of what was observed up to 1968, it is perfectly understandable as a result of the aging of the sample and the consequently increased eligibility for entrance to the armed forces of those who were students in 1966. Among 1966 students the attrition rate due to armed forces entrance by 1969 was more than two-and-one-half times the comparable rate for 1966 nonstudents (Table 1A-1). In general, blacks have had a higher net rate of attrition from the sample than whites, even considering a somewhat higher return-to-the-sample rate for blacks. The intercolor difference is not attributable to a difference in the rate of entrance to the armed forces. As has been observed in previous reports, among whites refusal has been more common than "disappearance." Among blacks the opposite has been true.

A detailed breakdown of the net attrition rate by selected demographic, social and economic characteristics is presented in Tables 1A-1 and 1A-2. Above-average net attrition rates typified young men who were unemployed at the time of the initial survey, irrespective of their school enrollment status in 1966. Among those who were nonstudents in 1966 attrition has been particularly pronounced for those under 18 years of age (in 1966) principally because of their susceptibility to the military draft.

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4 Nevertheless, absolute figures in the report clearly cannot be construed to be accurate estimates of the civilian noninstitutional population as of 1969.

5 These reasons include temporary absence from the home, institutionalization, and death.

Several aspects of changes in the sample between the 1968 and 1969 surveys are also noteworthy. As mentioned above, net attrition rates do not reveal the entire picture of changes in the sample's size and composition. More than 6 percent of those interviewed in 1969 had been noninterviewees in one or both of the two preceding surveys (Table 1.1). This phenomenon of recovering temporary absentees is expected to grow as the surveys continue because of the return to the civilian population of men who were interviewed in 1966 and subsequently entered the military service.[6] Our optimism in this regard is based on the already-exhibited diligence of Census interviewers and on the cooperativeness of respondents. For example, nearly one-half of the 1968 noninterviewees who were "eligible" to be interviewed in 1969 were, in fact, interviewed in 1969.[7] In addition, a comparison between the net attrition rate to 1968 and the net rate to 1969 reveals that among 1966 nonstudents 82 percent of the whites were interviewed in 1968 and an identical proportion in 1969, while the respective proportions for blacks were 78 and 76 percent. Thus, although those groups undoubtedly exhibited some gross movement out of the sample between the third and fourth surveys, the return flow was sufficient to make the net change virtually zero. For one discernible, albeit small, subset of those 1966 nonstudents--i.e., those out of the labor force in 1966 survey week--the net attrition rate as of 1969 was actually below the net rate as of 1968.

Not surprisingly, dropping out of the sample between the third and fourth interview dates is strongly associated with a history of mobility during the first two years of the survey. For example, nearly one-fifth of the young men who left school between the first and third interviews were not reinterviewed in the fourth wave. Similarly, those who changed county (SMSA) of residence between 1966 and 1968 were less likely than those who remained in the same county to be reinterviewed in 1969. These associations indicate that there may be a downward bias in the measured extent of several types of mobility which will be discussed in subsequent chapters. However,

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6 Current tabulations do not permit direct examination of these types of gross and net flows. In addition, the period between the first and fourth interviews is barely long enough to permit many respondents to have completed a full tour of military duty.

7 The ineligible group consisted of the following: (1) those who were deceased, (2) those who had refused in 1967 or 1968, (3) those who were noninterviewees in both 1967 and 1968 for any reason other than being in the military population, and (4) those who remained in the armed forced as of 1969.

there is no reason to believe that attrition biases the findings concerning the correlates of mobility.

III CHANGES IN SCHOOL ENROLLMENT STATUS 1966 TO 1969

The passage of three calendar years since the initial survey has resulted in a major change in the student-nonstudent composition of the cohort of young men under study. Even the youngest of them (17 years old in 1969) were at an age at which discontinuation of formal schooling is nearly as much the rule as the exception. The data in Table 1.2 indicate the substantial decline in the enrollment rate of the cohort from three-fifths in 1966 to less than two-fifths in 1969. The widening intercolor gap results from both higher rates of dropping out of high school and lower rates of matriculation into college among blacks.

Table 1.2 Proportion Enrolled in School, by Survey Year and Color: Youth[a] Interviewed in 1966, 1967 and 1969

Color group	Total number (thousands)	Enrollment rate			
		1966	1967	1968	1969
Whites	10,603	60.9	54.7	46.1	37.3
Blacks	1,334	50.5	43.5	34.4	23.3

a Unless otherwise noted, tables in this report refer to respondents who were 17 to 27 years of age in 1969.

During the course of the survey about one third of the youth made a change in their school enrollment status (Table 1.3). However, as has been shown in previous reports, the path between school and the labor market is not a one-way street. By the date of the fourth annual interview, about one in twelve whites and one in twenty-five blacks had returned to school for at least one year. Once re-enrolled, young white men also tended to stay in school longer than their black counterparts--i.e., 30 percent of the former remained for at least two years compared to 18 percent of the latter. This intercolor difference undoubtedly reflects the facts that the temporary interruption for

Table 1.3 Comparative School Enrollment Status 1966 Through 1969, by Color: Youth Interviewed in 1966, 1967 and 1969[a]

(Percentage distribution)

Comparative school enrollment status 1966 through 1969	Percent of total	Percent of subtotal	Percent of subtotal
	WHITES		
Same status 1966-69			
Enrolled	31		
Not enrolled	34		
Changed status	34	100	
Left school did not return[b]	27	78	
Left school and returned			100
For 1 year[c]	5	15	70
For 2-3 years	2	7	30
Total percent	100		
Total number (thousands)	10,603	3,637	816
	BLACKS		
Same status 1966-69			
Enrolled	21		
Not enrolled	47		
Changed status	32	100	
Left school did not return[b]	28	88	
Left school and returned			100
For 1 year[c]	3	10	82
For 2-3 years	1	2	18
Total percent	100		
Total number (thousands)	1,334	432	53

a For a small number of respondents interviewed in 1969, but not interviewed in 1968, enrollment status in 1968 was determined retrospectively.

b Includes the following groups: (1) Enrolled 1966, not enrolled 1967-69; (2) Enrolled 1966-67, not enrolled 1968-69;and (3) Enrolled 1966-68, not enrolled 1969.

c Includes the following groups: (1) Enrolled 1966-67 and 1969, not enrolled 1968; (2) Enrolled 1966 and 1968, not enrolled 1967 and 1969; (3) Enrolled 1966 and 1969, not enrolled 1967-68; (4) Not enrolled 1966, 1968-69, enrolled 1967; (5) Not enrolled 1966-67 and 1969, enrolled 1968; and (6) Not enrolled 1966-68, enrolled 1969.

whites is more often a break just prior to college entrance or during college, whereas for blacks the temporary interruption is more likely to occur during high school. Though not shown in the table, approximately equal percentages of the blacks and whites (43 and 45 percent, respectively) who returned to school had been out for two or more years. Finally, and also based on computations not shown here, the average annual return rate (i.e., the percentage of those not enrolled in year "x" who were enrolled in year "x + 1") is about 6 percent among whites and 2 percent among blacks.

IV PATTERN OF MARITAL STATUS CHANGE 1966 TO 1969

Another characteristic which often changes as a youth passes from his late teens to his late twenties is marital status. This characteristic may be important for labor market behavior to the extent that its change signals a change in a young man's financial responsibilities, mobility propensities, and dependence upon his family of orientation. Several relationships between labor market experience and marital status change are examined in subsequent chapters. Between the dates of the initial and fourth surveys, more than one-fifth of the youth, irrespective of color, experienced a change in marital status (Table 1.4). One percent of the whites and 2 percent of the blacks changed marital status at least twice. As would be expected from this age cohort, the vast majority of changers got married.[8] The intercolor difference in the proportion currently married doubled between 1966 and 1969 (from 5 to 10 percentage points) because relatively more whites than blacks became married and relatively fewer whites than blacks became divorced.

V GEOGRAPHIC MOVEMENT 1966 TO 1969[9]

The purpose of presenting patterns of geographic movement among selected subsets of the youth under study is to depict the longitudinal

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8 Despite the correlation between age and marital status, approximately one-third of the first marriages occurred in each of the 12-month periods between surveys.

9 Migration status is determined by aggregating three pair-wise comparisons (i.e., 1966-67, 1967-68 and 1968-69) of the county (or SMSA) of residence at the time of the survey. Clearly, this method of measurement results in some ambiguities. For example, there may be some respondents classified as "migrant" who made exactly two moves and are back where they began. On the other hand, there are probably some youth classified as "nonmigrant" who had the same experience, but for whom the two moves occurred within a 12-month period between surveys.

Table 1.4 Pattern of Marital Status Change 1966 Through 1969, by Color: Youth Interviewed in 1966, 1967 and 1969

(Percentage distribution)

Pattern of marital status change 1966 through 1969	WHITES	BLACKS
Same status 1966-1969	79	78
Never married	56	62
Married, wife present	22	15
Other	a	1
One change in status	20	20
Never married to married, wife present	18	15
Married, wife present to divorced or separated	2	4
Other	a	1
Two or more changes in status	1	2
Total percent	100	100
Total number (thousands)	10,603	1,334

a Between 0.1 and 0.5 percent.

migration experience of the sample. Because of the attrition from the sample, it is not legitimate to infer from these data estimates of national migration rates. Although the bias in this regard is obviously downward, there is no satisfactory method of estimating its magnitude.[10] Nevertheless, in an attempt to minimize the degree of understatement, the data are presented here for two subgroups of youth among whom attrition rates are below average, namely (1) young men enrolled at each of the survey dates and (2) young men out of school at all four dates. For ease of exposition here the two groups are referred to as "students" and "nonstudents," respectively.

For each color group, nonstudents were more likely than students to have made at least one geographic move (Table 1.5), and within each enrollment-status group whites appear more likely than blacks to have moved. Similar differences are evident in the probability of having made multiple moves during the period. However, the intercolor difference in migration rates undoubtedly is overstated because of the intercolor difference in reasons for attrition from the sample. For students and nonstudents alike, the noninterview rates in 1969 due to "inability to locate" were considerably higher among blacks than among whites. For example, among youth enrolled 1966 to 1968 the rates were 5 and 1 percent for blacks and whites, respectively; and for those out of school 1966 to 1968 the corresponding figures were 8 and 3 percent.

VI CHANGE IN ECONOMIC ENVIRONMENT, 1966-1969 AND 1967-1969

In order to set the examination of two- or three-years longitudinal change in a larger context, it is necessary to take note of differences in external economic conditions which prevailed at the terminal points of those periods. Comparison of the results of the Current Population Survey (CPS) for the beginning and ending dates of the three-year period (i.e., October 1966 and 1969) reveals a general deterioration of the labor market faced by men in their late teens and early twenties. In five of the six age-color groups of 18- to 24-year-old men not enrolled in school, labor force participation rates were lower in October 1969 than in October 1966 (Table 1.6). Furthermore, for four of the six age-color groups unemployment rates were higher in 1969, and for the two exceptions the registered declines are quite small (i.e., from 7.9 to 7.8 percent for whites 18 and 19 and from 10.1 to 9.3 for blacks 20 and 21).

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10 For an attempt to adjust the observed one-year rates of migration when attrition from the sample was less than 10 percent, see Zeller et al., Career Thresholds, 2:47-50.

Table 1.5 Migration Pattern[a] Between the 1966 and 1969 Surveys by Selected Comparative School Enrollment Status 1966-1969 and Color: Youth Interviewed All Four Years

(Percentage distribution)

Migration pattern between 1966 and 1969 surveys[a]	Enrolled in school at each survey date		Out of school at each survey date	
	WHITES	BLACKS	WHITES	BLACKS
Nonmigrant	86	91	75	85
Migrant	14	9	25	15
1 move	12	9	19	13
2 or more moves	2	b	6	2
Total percent	100	100	100	100
Total number (thousands)	3,307	273	3,545	577

a Migration status is determined by aggregating three pair-wise comparisons (i.e., 1966-67, 1967-68 and 1968-69) of the county (SMSA) of residence at the time of the survey. Young men who entered college during the period 1966 to 1969 are not considered to be migrants unless they established a separate household or their parents moved. Thus, for example, those who reside in a dormitory, fraternity house, apartment, etc. are considered to be living at the address of their parental family.

b Between 0.1 and 0.5 percent.

Table 1.6 Labor Force Participation Rate and Unemployment Rate of Men 18 to 24 Years of Age, Not Enrolled in School, According to Current Population Survey, by Age and Color, October 1966, October 1967 and October 1969
(Numbers in thousands)

Age and labor force and employment status	WHITES					NEGROES AND OTHER RACES				
	October 1966	October 1967	October 1969	Difference 1969-1966	Difference 1969-1967	October 1966	October 1967	October 1969	Difference 1969-1966	Difference 1969-1967
18 and 19										
Population	1,147	1,076	1,074			199	196	214		
Labor force participation rate	89.2	87.8	89.4	+0.2	+1.6	84.9	88.3	82.8	-2.7	-6.1
Unemployment rate	7.9	9.2	7.8	-0.1	-1.4	11.2	19.1	14.8	+3.6	-4.3
20 and 21										
Population	1,082	1,166	1,103			238	229	231		
Labor force participation rate	93.8	93.7	93.4	-0.4	-0.3	95.8	90.0	93.5	-2.3	+3.5
Unemployment rate	4.3	3.8	5.8	+1.5	+2.0	10.1	13.1	9.3	-0.8	-3.8
22-24										
Population	2,347	2,463	2,667			370	370	389		
Labor force participation rate	100.0	98.4	96.1	-3.9	-2.3	96.2	94.6	95.6	-0.6	+1.0
Unemployment rate	2.3	3.0	3.7	+1.4	+0.7	3.1	5.4	6.2	+3.1	+0.8
Total, 18-24										
Population	4,576	4,705	4,844			807	795	834		
Labor force participation rate[a]	95.8	94.8	94.0	-1.8	-0.8	93.3	91.7	91.6	-1.7	-0.1
Unemployment rate[a]	4.1	4.5	5.0	+0.9	+0.5	7.2	10.8	9.1	+1.9	-1.7

Sources: Vera C. Perrella, Employment of School Age Youth, October 1966, Special Labor Force Report no. 87 (Washington: U.S. Department of Labor, Bureau of Labor Statistics, 1967), Table D, p. A-8; Forrest A. Bogan, Employment of School Age Youth, October 1967, Special Labor Force Report no. 98 (Washington: U.S. Department of Labor, Bureau of Labor Statistics, 1968), Table C, p. A-7; Anne M. Young, Employment of School Age Youth, October, 1969, Special Labor Force Report no. 124 (Washington: U.S. Department of Labor, Bureau of Labor Statistics, 1970), Table C, p. A-11.

a Computed from grouped data.

The CPS data relevant to the two-year period (i.e., October 1967-October 1969) are less clear evidence of an overall change in the labor market for young men. For men 22 to 24, the somewhat higher unemployment rate in 1969 suggests a slight deterioration in market conditions. On the other hand, for blacks 18 to 21 and whites 18 and 19, the unemployment rates were noticeably lower in October 1969 than October 1967.

All things considered, changes in economic conditions would not appear to have had much influence on the longitudinal behavior which is examined below. Apparently, the anti-inflationary policy begun by the federal government in the second quarter of 1969 had not had much of a dampening impact on the labor market for young men by the beginning of the fourth quarter of 1969.

APPENDIX TABLES

CHAPTER ONE

Table 1A-1 Attrition Rate Between 1966 and 1969 Surveys by Reason and by Selected Characteristics of Respondents, 1966

Characteristic, 1966	Total number 1966 (thousands)	Noninterview rate			Armed forces	Total attrition rate
		Refusal	Unable to locate	Total[a]		
All respondents						
Whites	14,046	4	2	9	13	22
Blacks	1,919	3	6	14	13	27
Enrolled in school						
Whites	8,644	3	2	6	17	23
Blacks	979	3	4	11	19	30
Not enrolled in school						
Whites	5,402	5	4	11	7	18
Blacks	940	4	9	18	6	24
Student, employed in survey week						
Whites	3,974	3	2	5	19	24
Blacks	393	3	4	9	23	32
Student, unemployed in survey week						
Whites	654	4	2	7	23	31
Blacks	114	b	3	9	24	32
Student, out of labor force in survey week						
Whites	4,016	3	2	6	15	21
Blacks	472	3	5	14	14	28
Nonstudent, employed in survey week						
Whites	5,024	5	4	11	7	18
Blacks	834	4	9	17	6	23
Nonstudent, unemployed in survey week						
Whites	159	13	3	27	4	32
Blacks	54	2	9	22	11	33
Nonstudent, out of labor force in survey week						
Whites	219	8	2	17	22	39
Blacks	51	2	2	18	12	29
Nonstudent, 14 to 17 years of age						
Whites	549	4	6	13	27	40
Blacks	135	4	5	20	23	43
Nonstudent, 18 to 19 years of age						
Whites	1,188	3	6	13	15	28
Blacks	197	2	10	16	8	24
Nonstudent, 20 to 24 years of age						
Whites	3,664	6	2	11	b	11
Blacks	607	4	9	18	2	20

a Total includes some respondents who were not interviewed for other reasons including temporary absence, institutionalization, and death.

b Between 0.1 and 0.5 percent.

Table 1A-2 Net Attrition Rate Between 1968 and 1969 Surveys by Reason and by Selected Characteristics of Respondents, 1968

Characteristic, 1968	Total number 1968 (thousands)	Noninterview rate			Armed forces	Total attrition rate
		Refusal	Unable to locate	Total[a]		
All respondents 1968						
Whites	11,699	1	2	3	7	10
Blacks	1,540	1	6	9	7	16
Student 1966 and 1968						
Whites	5,136	1	1	2	7	9
Blacks	539	1	5	9	7	16
Student 1966, nonstudent 1968						
Whites	2,210	1	2	4	16	20
Blacks	289	0	3	5	18	23
Nonstudent 1966 and 1968						
Whites	4,214	2	3	6	1	7
Blacks	761	1	8	10	2	12
Nonstudent 1966, student 1968						
Whites	265	0	0	2	1	3
Blacks	11	b	b	b	b	b
Migrant 1966-68[c]						
Whites	1,919	1	4	6	5	11
Blacks	185	2	10	13	7	20
Nonmigrant 1966-68[c]						
Whites	9,780	1	2	3	7	10
Blacks	1,355	1	6	9	7	16
Married 1966-68[d]						
Whites	2,574	1	2	4	e	4
Blacks	243	3	7	10	0	10
Never married 1966, married 1968[d]						
Whites	1,433	1	1	3	3	6
Blacks	153	1	3	5	4	9
Never married 1966 and 1968						
Whites	7,388	1	2	3	10	13
Blacks	1,036	1	6	9	9	18
Married 1966, divorced or separated 1968						
Whites	144	5	8	15	3	18
Blacks	60	0	19	21	9	30

a Total includes some respondents who were not interviewed for other reasons including temporary absence, institutionalization and death.
b Percent not shown when base represents fewer than 25 sample cases.
c Migrant status is based on a comparison of county (SMSA) of residence in the two survey years. Thus, some of those classified as nonmigrants may have left the 1966 county of residence but returned to it by the 1968 interview.
d The term "married" includes only those married and living with wife.
e Between 0.1 and 0.5 percent.

CHAPTER TWO*

LABOR MARKET EXPERIENCE OF HIGH SCHOOL GRADUATES AND DROPOUTS

I INTRODUCTION

How do the labor market experiences of high school graduates differ from those of "dropouts"? Within the subset of dropouts, is there a positive relationship between years of schooling completed and favorable labor market experiences? Does length of labor market exposure affect the differences between dropouts and graduates--e.g., do the advantages of graduation diminish or disappear with time? Are the answers to the preceding questions the same for blacks and whites? These are the kinds of questions addressed in this chapter.

In order to examine the issues mentioned above we focus on the subset of young men who were not enrolled in school at the time of the 1969 survey and who had completed 12 or fewer years of schooling. The labor market experiences of the high school graduates are examined in Section II, with particular attention paid to the effects of length of labor market exposure.[1] Section III deals with a comparison of graduates and dropouts, and where possible, dropouts are subdivided into those with exactly 11, exactly 10, and 9 or fewer years of schooling completed.

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* This chapter was written by Andrew I. Kohen and Paul Andrisani.

1 The variable used to measure length of labor market exposure involves some verbal imprecision. The tables show the survey year in which the youth was last enrolled in school. However, since the surveys are conducted in October/November, the last calendar year of enrollment--at least for graduates--is probably one later than the year shown in the table. For example, those graduates enrolled at the time of the (October) 1966 survey did not leave school until (June) 1967. In addition, for ease of exposition, references in the text are made to those out of school one, two, three, and four-or-more years. In this case "years" refers to the number of survey dates since a young man was last enrolled, e.g., those referred to as being "out one year" were enrolled at the 1968 interview date and actually had been out of school less than six months.

II LABOR MARKET EXPERIENCES OF HIGH SCHOOL GRADUATES

Labor Force Participation and Unemployment

As would be expected, labor force participation on the part of high school graduates was quite high in the 1969 survey week. Among whites participation rates ranged from 93.1 percent for those who had just graduated to close to 100 percent for those who had been out of school three or more years (Table 2.1). The rates among blacks were equally high. Although those with the most labor market exposure had higher participation rates than those with the least exposure, the association between participation and length of time out of school is not monotonic for either color group. On the other hand, the relationship between unemployment rate and labor market exposure is more regular, at least among whites. From 7.3 percent among those who just graduated, the rate falls regularly to a low of 2 percent for those who were out of school at least three years.

Among youth who graduated since the 1966 survey, there is little difference between the unemployment rates of blacks and whites, but for those who were out longer the rate is higher among blacks. If these relationships are real, rather than the result of sampling error due to the limited number of sample cases, they may reflect the focus of manpower efforts on black teenagers in the latter years of the past decade and the changing social milieu of those same years.

The data in Table 2.2 provide further evidence of the growth in stability of employment which accompanies increased labor market exposure. Among whites and blacks the proportion of young men who were employed at both the 1968 and 1969 survey dates rises with length of time out of school. Among young white men, though not among their black counterparts, increased time in the labor market is also negatively related to the disemployment rate--i.e., to the probability of being unemployed in 1969 given that they were employed in 1968.

Occupational Distribution and Worker Mobility

The occupational distribution of young high school graduates varies systematically according to the number of years they have been out of school (Table 2.3). For example, white youth out of school four or more years are two and one-half times as likely as those out only one year to be professional or technical workers; four times as likely to be managers or proprietors; one-third as likely to be laborers; and about one-half as likely to be farm workers. There is also an "age effect" among black high school graduates, but its pattern is somewhat different. Blacks out of school four or more years are four times as likely as those out only one year to be in professional or technical occupations; three times as likely to be craftsmen or operatives; and about one-third as likely to be in service occupations.

Table 2.1 Survey Week Labor Force and Employment Status 1968 and 1969, by Survey Date of Last Enrollment[a] and Color: High School Graduates Interviewed All Four Years[b]

Survey date last enrolled[a]	Total number (thousands)	Labor force participation rate 1968	Labor force participation rate 1969	Difference 1969 minus 1968	Unemployment rate 1968	Unemployment rate 1969	Difference 1969 minus 1968
	WHITES						
1968	619	c	93.1	c	c	7.3	c
1967	427	93.1	96.7	+3.6	9.4	5.5	-3.9
1966	197	97.6	100.0	+2.4	2.1	3.8	+1.7
Before 1966	1,737	98.3	98.0	-0.3	0.2	2.0	+1.8
Total or average	2,979	c	97.0	c	c	3.7	c
Total or average of those out before 1968	2,361	97.3	97.9	+0.6	2.0	2.7	+0.7
	BLACKS						
1968	82	c	96.2	c	c	5.0	c
1967	55	87.9	89.4	+1.5	3.8	5.3	+1.5
1966	37	100.0	97.6	-2.4	0.0	2.4	+2.4
Before 1966	229	99.3	99.0	-0.3	0.7	3.6	+2.9
Total or average	403	c	97.0	c	c	4.5	c
Total or average of those out before 1968	321	97.4	97.2	-0.2	1.1	3.7	+2.6

a Because surveys are conducted in October/November, the last calendar year enrolled is determined by adding one year to the survey date last enrolled.

b Unless restricted further, tables in this chapter refer to the universe of youth who were 17 to 27 years of age in 1969 and not enrolled in school in the Autumn of 1969. The phrase "high school graduates" refers to those who completed exactly twelve years of school.

c Percentage not shown because the group includes youth who were students at the time of the 1968 survey and whose labor force status is not strictly comparable to that of youth out of school.

Table 2.2 Comparative Labor Force and Employment Status, Survey Weeks 1968 and 1969, by Survey Date Last Enrolled and Color: High School Graduates Interviewed All Four Years and Last Enrolled 1967 or Earlier[a]

Survey date last enrolled	Total number (thousands)	Percent employed both years	Percent unemployed both years	Percent out of labor force both years	Disemployment rate 1968-1969[b]
	WHITES				
1967	427	79.2	2.7	0.9	6.0
1966	197	91.7	0.0	0.0	3.9
Before 1966	1,737	95.2	0.0	0.6	2.9
Total or average	2,361	92.0	0.4	0.6	3.5
	BLACKS				
1967	55	81.2	1.6	8.7	3.9
1966	37	90.0	0.0	0.0	10.0
Before 1966	229	94.7	0.0	0.7	3.9
Total or average	321	91.8	0.1	2.0	4.6

a This is a further restriction of the universe described in note b, Table 2.1, p. 21.

b Percent of those employed in the 1968 survey week who were unemployed in the 1969 survey week.

Table 2.3 Major Occupation Group of Current or Last Job, by Survey Date Last Enrolled and Color: High School Graduates with Work Experience[a]

(Percentage distribution)

Current (last) occupation	1968	1967	1966	Before 1966	Total or average
	WHITES				
Professional, technical	2	3	4	5	4
Managerial, proprietor	3	4	4	12	8
Clerical	12	14	8	9	10
Sales	5	4	0	5	4
Craftsmen, foremen	21	9	19	26	22
Operatives	30	42	47	29	32
Nonfarm laborers	16	15	8	5	9
Service	4	4	5	4	4
Farm	7	5	6	4	5
Total percent	100	100	100	100	100
Total number (thousands)	619	427	197	1,732	2,974
	BLACKS				
Professional, technical	1	2	0	4	3
Managerial, proprietor	11	0	2	1	3
Clerical	17	18	13	10	13
Sales	1	0	4	1	1
Craftsmen, foremen	2	15	20	14	12
Operatives	20	33	38	46	38
Nonfarm laborers	21	30	18	16	19
Service	26	2	4	8	10
Farm	1	1	0	1	1
Total percent	100	100	100	100	100
Total number (thousands)	82	55	37	236	410

a This is a further restriction of the universe described in note b, Table 2.1, p. 21.

Intercolor differences in occupational distribution are quite substantial and tend to change with length of time out of school. For example, among whites the proportion in managerial occupations increases with time while the opposite is true among blacks. Also, the movement out of nonfarm laborer jobs is much more rapid among whites than among blacks, which causes the relative intercolor difference in the proportion in this occupation group to grow with increased time out of school.

The first year or two in the labor market is a period of very substantial experimentation with different jobs. Among whites, the likelihood of a graduate having changed employers between 1968 and 1969 declines from 82 percent of the most recent graduates to 26 percent of those out of school four or more years (Table 2.4). The corresponding percentages for blacks are 77 and 36 percent. Of particular interest is the fact that the youth who graduated since the 1968 survey do not show rates of 100 percent. That is, about one-fifth of the youth who graduated in (June) 1969 were working for the same employer five months after graduation as the one for whom they worked during their senior year. This phenomenon is deserving of further study, because it may point to a method of easing the transition from school to work. Future studies of this cohort of youth will attempt to investigate this issue in greater depth than is possible with tabulations currently available.

Table 2.4 Proportion Changing Employer at Least Once Between 1968 and 1969 Surveys, by Survey Date Last Enrolled and Color: High School Graduates Employed in 1968 and 1969[a]

Survey date last enrolled	WHITES		BLACKS	
	Total number (thousands)	Percent changers	Total number (thousands)	Percent changers
1968	535	82	75	77
1967	390	50	47	80
1966	189	51	33	52
Before 1966	1,667	26	226	36
Total or average	2,781	42	380	51

a This is a future restriction of the universe described in note b, Table 2.1, p. 21.

Among those high school graduates who did change employers between the 1968 and 1969 surveys, the single most frequently utilized method of finding the 1969 job was through friends or relatives (Table 2.5). About twice as widely used as any other single method, 43 percent of the white and 50 percent of the black graduates found their jobs in this manner. The next most frequently utilized method of job search was direct contact with employers, whereby 21 percent of the whites and 29 percent of the blacks found their 1969 job.

The pattern of job search differs somewhat between those young men who have been out of school four or more years and those who just graduated. This is especially true among the white youth. For example, those whites who were newly graduated were much more likely than the older youth to rely on friends and relatives. They were also somewhat more likely to have found their jobs through the public employment service and the school employment office, and somewhat less likely through newspaper ads, although these methods were not widely used by either group. Differences among the blacks are less pronounced, except for the lesser utilization of school and public employment services by those youth who have been out of school at least for years.

Aspirations and Commitment to Work

As has been observed in earlier studies of this cohort, occupational goals of young men are extremely volatile, even over a brief span of time.[2] Yet, it was expected that longer contact with the "realities" of the labor market should serve to stabilize long-range occupational aspirations. Specifically, we expected fewer changes among the young men who were continuously in the labor market than among those who left school during the period. This expectation is realized in the case of white high school graduates, but not in the case of their black counterparts (Table 2.6). White youth who were out of school at the time of the initial survey of aspirations (1966) were twice as likely as those who left school in the interim to have maintained the same aspiration annually from 1966 through 1969.[3] In contrast, the opposite relationship prevails among blacks.

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2 For example, see Kohen and Parnes, Career Thresholds, 3:11-15.

3 Occupational aspirations were measured in terms of the socioeconomic status of the occupation (Duncan index score) which the respondent reported a desire to attain by age 30. Changes in occupational aspirations over time were classified according to the scheme explained in notes b-e, Table 2.6.

Table 2.5 Method of Finding Current Job, by Survey Date Last Enrolled and Color: High School Graduates Who Changed Employers Between 1968 and 1969

(Percentage distribution)

Method of finding current job	Survey date last enrolled				
	1968	1967	1966	Before 1966	Total or average
	WHITES				
School employment service	5	7		0	4
Public employment service	4	4		2	3
Private employment service	2	c		4	2
Directly with employer	21	17		20	21
Newspaper ads	4	8	b	9	8
Friends or relatives	53	49		34	43
Other or combination	11	14		30	19
Total percent	100	100		100	100
Total number (thousands)	434	193	80	434	1,141
	BLACKS				
School employment service	3	0		0	1
Public employment service	10	15		5	11
Private employment service	0	2		0	c
Directly with employer	31	23		34	29
Newspaper ads	3	0	b	3	2
Friends or relatives	50	60		47	50
Other or combination	3	0		11	7
Total percent	100	100		100	100
Total number (thousands)	60	37	17	81	194

a This is a further restriction of the universe described in note b, Table 2.1, p. 21.

b Percentages not shown where base represents fewer than 25 sample cases.

c Between .01 and 0.5 percent.

Table 2.6 Pattern of Occupational Aspirations 1966 Through 1969, by Survey Date Last Enrolled and Color: High School Graduates with Work Experience Between 1968 and 1969 Who Were Interviewed All Four Years[a]

(Percentage distribution)

Pattern of occupational aspirations 1966-1969[b]	Survey date last enrolled			
	1968	1967	1966	Before 1966
	WHITES			
Same each year	11	8	10	23
Upward, consistent[c]	17	8	16	18
Downward, consistent[d]	13	24	14	14
Net uncertain, irregular[e]	35	38	41	31
"Don't know" in one or more years	25	23	19	14
Total percent	100	100	100	100
Total number (thousands)	615	411	188	1,699
	BLACKS			
Same each year	20	13	10	11
Upward, consistent[c]	11	9	0	17
Downward, consistent[d]	13	20	18	17
Net uncertain, irregular[e]	40	34	28	34
"Don't know" in one or more years	15	24	44	20
Total percent	100	100	100	100
Total number (thousands)	78	53	37	222

a This is a further restriction of the universe described in note b, Table 2.1, p. 21.

b The direction (upward, downward) of revision of occupational aspiration in any two consecutive years is defined as the arithmetic difference (positive, negative) between the Duncan index scores of the desired occupations, where the score in the first year is subtracted from the score in the second year.

c Includes all patterns which contain one or more upward revisions and no downward revisions between any two consecutive surveys.

d Includes all patterns which contain one or more downward revisions and no upward revisions between any two consecutive surveys.

e Includes all patterns which contain at least one upward revision and one downward revision between any two consecutive surveys.

The direction of aspirational change does not appear to be consistently related to whether the youth left school between 1966 and 1969. Also, there is no systematic intercolor difference in pattern of goal revision. Aspirations are more stable for whites than for blacks among the youth who were continuously out of school, but the opposite is true among those who graduated between 1966 and 1969. It is interesting that nearly one-fifth of both white and black high school graduates hold aspirations which are higher than those which they expressed at the initial interview, irrespective of whether they were in school at that time.[4]

Though it is not perfectly regular, there seems to be a positive association between length of labor market exposure and commitment to work, where the latter is measured by response to the question "If, by some chance, you were to get enough money to live comfortably without working, do you think you would work anyway?" Among whites, 88 percent of those out of school four or more years responded "yes" as compared to 78 percent of those out only one year (Table 2.7). For blacks the corresponding figures are 80 and 73 percent. Thus, experience in the labor market appears to reinforce the work ethic, even within the reasonably homogeneous group of young men with exactly 12 years of education.

III COMPARISON OF DROPOUTS AND HIGH SCHOOL GRADUATES

In comparing those young men who completed exactly 12 years of schooling with those who completed fewer years, we are seeking the answers to several basic questions. Most importantly, is dropping out of school systematically associated with less favorable labor market experiences than those accruing to high school graduates? For instance, are there differences between dropouts and graduates in labor force participation, unemployment, occupational distribution, hourly earnings, interfirm mobility, and participation in post-school training programs? Second, do black dropouts and graduates fare differently in the labor market than their respective white counterparts? Also, do intercolor differences in labor market experience prevail in all educational attainment categories? And finally, are dropouts a homogeneous group irrespective of number of years of school completed or is dropping

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4 It is possible that some of these young men are only temporarily out of school and plan to obtain college degrees. However, this seems very unlikely for those who have been nonstudents continuously since the first survey.

Table 2.7 Commitment to Work,[a] by Survey Date Last Enrolled and Color: High School Graduates Who Were Able to Work in 1969[b]

(Percentage distribution)

Commitment to work[a]	1968	1967	1966	Before 1966	Total or average
	WHITES				
High	78	77	81	88	84
Low	17	19	17	10	13
Uncertain	5	4	2	2	3
Total percent	100	100	100	100	100
Total number (thousands)	619	427	197	1,733	2,976
	BLACKS				
High	73	79	89	80	79
Low	24	21	2	18	18
Uncertain	3	0	9	2	3
Total percent	100	100	100	100	100
Total number (thousands)	82	55	37	236	410

a Commitment to work is measured by responses to the following question: "If, by some chance, you were to get enough money to live comfortably without working, do you think you would work anyway?" Responses were coded into three categories--yes, no, and uncertain.

b This is a further restriction of the universe described in note b, Table 2.1, p. 21.

out after completing 11 years of schooling more advantageous than dropping out, say, after 10 years?[5]

Before proceeding to the analysis, it is well to note several caveats which must be borne in mind in assessing the findings. As is well known, one cannot legitimately infer causality from the observation of even strong statistical associations. Thus, the tabulations in this section do not permit an unequivocal answer to the question of whether dropping out of school prior to graduation "causes" lower wages, more unemployment, etc. Rather, we must acknowledge the strong possibility that both dropping out and unfavorable labor market experience are symptoms of some earlier set of causes.[6] For example, it is clear from Table 2.8 that the mental ability of high school graduates is markedly higher than that of dropouts.[7] Furthermore, these ability differences prevailed prior to discontinuation of school. That is, to the extent possible the ability scores were standardized for the form and level of the tests so as to represent "intelligence" at a common stage for all respondents. Thus, among whites, only one in twenty dropouts was above average in ability as compared to one in eight graduates; and 45 percent of the dropouts were below average in contrast to only 12 percent of the graduates. Similar, though less dramatic, differences are also apparent among dropouts classified by single year of school completed.

It should also be borne in mind that the graduate/dropout differences will understate the "true" effect of completing high school to the extent that the two groups are of the same age and have progressed

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5 Insufficient sample cases preclude an analysis which adresses the effect of attending high school, as opposed to leaving school prior to the ninth grade.

6 This is the conclusion reached by Jerald G. Bachman et al., in Youth in Transition, Volume III: Dropping Out--Problem or Symptom? (Ann Arbor: The University of Michigan, 1971).

7 Mental ability is measured here by the stanine score derived from the raw score on one of several tests of mental aptitude as reported by the last secondary school attended by the respondent. For a detailed discussion of the pooling of scores from many different tests of mental ability see Appendix E. Stanine intervals of 1 through 9 contain the following proportions of the (theoretical) population: lowest 4 percent, 7, 12, 17, 20, 17, 12, 7 and highest 4 percent.

Table 2.8 Measured Mental Ability, by Survey Date Last Enrolled, Highest Year of School Completed and Color: Youth Who Had Completed 9 to 12 Years of School[a]

Survey date last enrolled and highest year completed	Total number (thousands)	Percent above average[b]	Percent below average[c]	Mean stanine
	WHITES			
1966-1968				
11 or less	227	2	42	3.5
12	1,139	17	13	5.1
Before 1966				
11 or less	751	6	45	3.9
12	1,598	10	12	4.9
Total				
9 or less	227	3	44	3.7
10	341	3	52	3.7
11	410	8	39	4.0
12	2,736	13	12	5.0
	BLACKS			
1966-1968				
11 or less	53	0	37	3.1
12	143	16	36	3.4
Before 1966				
11 or less	154	2	50	2.4
12	159	5	43	3.1
Total				
9 or less	48	0	74	1.4
10	76	0	37	2.7
11	83	3	44	2.7
12	303	10	40	3.3

a This is a further restriction of the universe described in note b, Table 2.1, p. 21.

b For whites, percent in stanines 7-9; for blacks, percent in stanines 6-9.

c For whites, percent in stanines 1-3; for blacks, percent in stanines 1-2.

through the school system at the same rate. That is, since length of labor market exposure has a beneficent influence on labor market experience, an eleventh grade dropout, under the above assumptions, will have benefited by one more year's experience than a graduate. In some instances we are able to overcome this problem by controlling directly for the length of labor market exposure. In other cases, small sample sizes force us to group together all dropouts and/or all youth out of school one to three years. As the data in Table 2.9 indicate, although the dropouts are younger than the graduates, the age difference is smaller than the difference in amount of schooling completed.[8] Therefore, the dropouts will exhibit the benefits of additional labor market exposure.

Labor Force Participation and Unemployment

In order to examine both cross-sectional and longitudinal differences between graduates and dropouts in labor force and employment status we present data based on the 1968 and 1969 survey weeks, and confine our attention to those young men who were out of school at the time of both surveys (Table 2.10). It was anticipated that graduates would experience higher rates of labor force participation and lower rates of unemployment than dropouts within each color group, and that additional years of schooling would be directly related to greater stability of participation and inversely related to unemployment within each color group.

In general, the anticipated cross-sectional relations are supported by the data. Irrespective of length of time out of school and color, graduates exhibit higher rates of participation and lower rates of unemployment than do youth who discontinued their schooling before completing 12 years (Table 2.10). However, among the white youth, differentials in labor force participation and unemployment rates appear to diminish substantially over time. For those whites who were last in school in 1966 or 1967, the differentials in participation and unemployment rates between dropouts and graduates are 13.0 and 10.9 percentage points, respectively. Among those who left school prior to 1966 the corresponding differentials are only 2.0 and 1.3 percentage points. For blacks, although there is some decline in the unemployment rate differential, a substantial disadvantage continues to be associated with dropping out.

For both color groups and irrespective of length of labor market exposure, a larger proportion of graduates than of dropouts were in

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8 The data in Table 2.9 are consistent with the hypothesis that dropouts are frequently "behind" in school before dropping out.

Table 2.9 Mean Age in 1969, by Survey Date Last Enrolled, Highest Year of School Completed and Color: Youth Who Had Completed 12 or Fewer Years of School[a]

Survey date last enrolled and highest year of school completed	WHITES		BLACKS	
	Total number (thousands)	Mean age	Total number (thousands)	Mean age
1968				
11 or less	93	17.7	60	18.2
12	619	18.1	82	18.2
1967				
11 or less	143	18.9	47	18.5
12	427	19.0	55	18.8
1966				
11 or less	151	19.4	45	19.2
12	197	19.9	37	19.8
Before 1966				
9 or less	725	23.0	226	23.5
10	298	23.9	71	22.9
11	303	24.2	71	23.8
12	1,737	24.4	236	24.3

a This is a further restriction of the universe described in note b, Table 2.1, p. 21.

Table 2.10 Survey Week Labor Force and Employment Status 1969, by Survey Date Last Enrolled, Highest Year of School Completed and Color: Youth Not Enrolled in 1968 and 1969 Who Had Completed 12 or Fewer Years of Schooling[a]

Survey date last enrolled and highest year of school completed	Total number (thousands)	Labor force participation rate	Unemployment rate
	WHITES		
1966 or 1967			
11 or less	294	84.6	15.8
12	627	97.6	4.9
Before 1966			
11 or less	1,326	96.0	3.3
12	1,737	98.0	2.0
	BLACKS		
1966 or 1967			
11 or less	92	89.5	19.7
12	92	92.6	6.1
Before 1966			
11 or less	368	95.2	8.5
12	229	99.0	3.6

a This is a further restriction of the universe described in note b, Table 2.1, p. 21.

the labor force both years (Table 2.11). Similarly, graduates were more likely than dropouts to have been employed at both survey dates. Greater stability among graduates than among their counterparts with less schooling is also evidenced by the lower rates of "disemployment" for the former group. That is, the likelihood of a dropout who was employed at the 1968 survey being unemployed at the 1969 survey is more than twice the corresponding likelihood for those with a high school diploma, and this relationship is apparent for blacks as well as whites.

Finally, an additional perspective on differences in labor force and employment status between dropouts and graduates may be gained from examining hours of work. Among young men employed at the time of the 1969 survey, those with 12 years of schooling were more likely than those with 11 or fewer years of schooling to be working full time (i.e., 35 or more hours/week) (Table 2.12). However, the differentials in percent working full time appear to be substantially diminished with increasing labor market exposure. The differentials between dropouts and graduates are 21 and 11 percentage points for whites and blacks respectively, among youth last in school in 1966 or 1967. Among those youth who left school prior to 1966, the differentials are only 2 percentage points in the case of whites and 5 percentage points for blacks.

Occupation and Earnings

For the cohort of male youth under study, there are marked differences between dropouts and graduates in terms of occupational distribution. As would be expected, dropouts are more likely than graduates to be in low level occupations (e.g., nonfarm laborer and service jobs) and less likely to be in high level jobs (e.g., professional and managerial) (Table 2.13). While length of labor market exposure has a pronounced impact on occupational distribution, the graduate/dropout differences prevail for those out of school prior to the 1966 survey and for those who left school subsequent to that time. In fact, additional labor market experience seems to widen the graduate/dropout disparities. It might be expected that this occurs as a result of a greater likelihood of upward movement over time by those with 12 years of schooling as compared with dropouts. For example, among young whites out of school less than four years, graduates are less than twice (7 versus 4 percent) as likely as dropouts to be in professional or managerial positions, whereas the corresponding ratio is two and a-half to one (17 versus 7 percent) for those out four or more years. The positive association between the size of the graduate/dropout gap and labor market exposure among young black men is best illustrated by reference to movement out of lower level occupations. For example, among those out of school less than four years, graduates are nine-tenths as likely to be in nonfarm laborer and service occupations, while the corresponding ratio for those out of school four or more years is three-fourths.

Table 2.11 Comparison of Survey-Week Labor Force Status 1968-1969, by Survey Date Last Enrolled, Highest Year of School Completed and Color: Youth Not Enrolled in 1968 and 1969 Who Had Completed 12 or Fewer Years of School[a]

Survey date last enrolled and highest year of school completed	Total number (thousands)	Percent in labor force both years	Percent employed both years	Disemployment rate[b]
	WHITES			
1966 or 1967				
11 or less	294	76	61	12.9
12	624	93	83	3.4
Before 1966				
11 or less	1,326	93	88	3.1
12	1,737	97	95	1.8
	BLACKS			
1966 or 1967				
11 or less	92	80	66	12.4
12	92	90	85	4.3
Before 1966				
11 or less	368	92	81	7.6
12	229	99	95	3.7

a See note a, Table 2.10, p. 34.
b Percent of those employed in 1968 who were unemployed in 1969.

Table 2.12 Hours Worked During Survey Week 1969, by Survey Date Last Enrolled, Highest Year of School Completed and Color: Youth Who Had Completed 12 or Fewer Years of School and Were Working During the 1969 Survey Week[a]

Survey date last enrolled and highest year of school completed	Total number (thousands)	Percent working full time[b]	Mean hours worked
	WHITES		
1966-1968			
11 or less	232	61	41.4
12	1,082	82	41.9
Before 1966			
11 or less	1,200	87	45.5
12	1,593	89	46.3
	BLACKS		
1966-1968			
11 or less	108	73	40.3
12	149	84	40.3
Before 1966			
11 or less	304	84	43.2
12	221	89	44.4

a This is a further restriction of the universe described in note b, Table 2.1, p. 21.

b Full-time is defined as 35 or more hours per week.

Table 2.13 Occupational Distribution 1969, by Highest Year of School Completed, Survey Date Last Enrolled and Color: Youth with Work Experience Who Had Completed 12 or Fewer Years of School [a]

(Percentage distribution)

Current (or last) occupation 1969	Last enrolled 1966-68		Last enrolled before 1966	
	11 or less	12	11 or less	12
	WHITES			
Professional, technical	2	3	1	5
Nonfarm managers, proprietors	2	4	6	12
Clerical	4	12	3	9
Sales	2	4	4	5
Craftsmen, foremen	15	17	23	26
Operatives	35	37	40	29
Nonfarm laborers	23	14	14	5
Service	13	4	3	4
Farm	4	6	5	4
Total percent	100	100	100	100
Total number (thousands)	387	1,243	1,309	1,732
	BLACKS			
Professional, technical	1	1	0	4
Nonfarm managers, proprietors	0	6	1	1
Clerical	5	16	4	10
Sales	3	1	0	1
Craftsmen, foremen	7	10	15	14
Operatives	36	28	37	46
Nonfarm laborers	32	23	24	16
Service	10	14	8	8
Farm	6	1	10	1
Total percent	100	100	100	100
Total number (thousands)	149	174	365	236

a This is a further restriction of the universe described in note b, Table 2.1, p. 21.

Additional labor market exposure seems to lead to greater intercolor disparities in occupational distribution. Among dropouts with less than four years' experience, the only perceptible difference is the higher concentration of whites than of blacks in high level blue-collar jobs (i.e., craftsmen and foremen) and the concomitantly lower proportion of whites than blacks in low level blue-collar jobs (i.e., nonfarm laborers). These differences persist among those with four or more years of exposure, but additionally whites are noticeably more likely to be located in white-collar jobs. Similar relationships exist among the high school graduates. For example, among the recent graduates there is no intercolor difference in the proportion in upper level white-collar jobs, but among those with at least four years of exposure whites are three times as likely as blacks to occupy such jobs.

The data on hourly earnings suggest that the monetary advantages of completing high school over dropping out are not realized immediately. However, by the third year after leaving school the hourly earnings of graduates are noticeably higher than those of dropouts (Table 2.14). Further, among young men out four or more years, the greater labor force experience of dropouts vis-a-vis graduates is insufficient to keep the education/earnings relation from being monotonic. Additionally, for whites and blacks alike, the beneficial effect of labor market exposure on wages seems to be more regular and stronger for graduates than for youth with 11 or fewer years of schooling. If these data are indicative of lifetime trends, the earnings advantage of graduates over dropouts will continue to widen. This would provide strong support for the governmental "anti-dropout" campaigns which have characterized the past decade, but only if discontinuation of education prior to high school graduation is the "real cause."[9] We are reluctant to assert that it is the "real cause" for several reasons. For one thing, as noted above, there is a strong positive correlation between mental ability and schooling. For another, at least one study has shown that mental ability (measured prior to school completion) has a significant effect on wages which is independent of schooling.[10]

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9 Bachman and his co-researchers conclude that ". . . dropping out is not primarily a problem in its own right, but rather a symptom of other problems or limitations" and go on to argue for the curtailment of "anti-dropout" campaigns. Youth in Transition, Volume III:178-81.

10 See Andrew I. Kohen, "Determinants of Early Labor Market Success Among Young Men: Race, Ability, Quantity and Quality of Schooling" (Ph.D. diss., The Ohio State University, 1972).

Table 2.14 Mean Hourly Earnings in 1969, by Survey Date Last Enrolled, Highest Year of School Completed and Color: Youth Employed as Wage and Salary Workers Who Had Completed 12 or Fewer Years of School[a]

Survey date last enrolled and highest year of school completed	WHITES		BLACKS	
	Total number (thousands)	Mean hourly earnings (dollars)	Total number (thousands)	Mean hourly earnings (dollars)
1968				
11 or less	88	b	54	2.24
12	585	2.32	79	2.20
1967				
11 or less	131	2.70	41	2.26
12	375	2.66	48	2.43
1966				
11 or less	137	2.43	40	2.13
12	166	3.03	33	2.64
Before 1966				
9 or less	664	2.77	204	2.00
10	272	3.16	68	2.42
11	257	3.54	71	2.71
12	1,559	3.61	233	2.86

a This is a further restriction of the universe described in note b, Table 2.1, p. 21.

b Mean not shown where base represents fewer than 25 sample cases.

The data in Table 2.14 also provide interesting information about intercolor differences in earnings. Although blacks clearly earn less than whites in each education-experience category, the overall intercolor difference is partly attributable to the lower educational attainment of blacks as compared to whites. For example, among those who had left school prior to the 1966 survey, standardizing for educational attainment would reduce the overall relative intercolor differential from 35 to 28 percent in favor of whites. Also contributing to the overall intercolor difference is the fact that in each length-of-exposure category the black/white percentage differential in earnings is greater for dropouts than for graduates. However, while increased schooling appears to improve the earnings position of young blacks vis-a-vis whites, labor market experience does not seem to have the same beneficial effect for blacks. Among graduates out of school only one year the mean wage of whites is only five percent higher than that of blacks. This differential is 9 percent, 15 percent and 26 percent for the succeedingly higher experience groups.

Mobility

It was anticipated that years of schooling would be inversely related to both the incidence of interfirm movement and the number of interfirm shifts during the 36-month period between the initial and fourth surveys.[11] Also, it was anticipated that blacks would tend to experience higher rates of interfirm movement than whites with the same amount of education. The first hypothesis is offered for two basic reasons. First, to the extent that years of schooling reflect actual and/or potential skill and productivity, the less educated youth would be more likely to experience involuntary job separations. Second, the less well educated are expected to engage disproportionately in occupations most subject to unstable employment patterns.

Based on empirical and theoretical considerations rates of interfirm movement were expected to be higher among blacks than among whites. First, young black men are more subject than their white counterparts to involuntary job separation because of lower skills

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11 Our data on the extent of interfirm mobility undoubtedly understate the total amount of movement among young men during the three-year reference period. Although they refer to both the number of movers and the number of moves made during the course of the period, nearly one-fifth of those in the 1966 sample who were out of school and employed were not reinterviewed in 1969. While many of these noninterviewees entered the armed forces and would not affect our estimates, the remainder of the group probably contains a disproportionately large number of young men who changed employers during the three years.

(lower quality of education for the same years of schooling and less formal out-of-school training), and relatively greater concentration in occupations most subject to unstable employment. In addition, the intercolor differences in the occupational distribution of young men may very well imply, ceteris paribus, a greater likelihood of blacks making voluntary shifts. That is, blacks are more heavily concentrated--relative to whites--in the farm worker and nonfarm laborer categories which have been shown in at least one study to exhibit comparatively high rates of voluntary interfirm movement.[12] Finally, earlier studies of the cohort of young men being examined here do show that blacks are more mobile than whites, controlling for education, and indicate that blacks have a weaker degree of "attachment" to an employer as measured by responses to a hypothetical job offer.[13]

The data presented in Table 2.15 offer more support for the education-mobility hypothesis for whites than for blacks. For the former group the probability of having made at least one interfirm shift between 1966 and 1969 decreases monotonically with years of schooling, and graduates are more than twice as likely as nongraduates to have remained with the same employer continuously. Among blacks, the comparison of graduates to all dropouts yields no difference in movement rates. Among whites the probability of multiple (at least two) changes of employer diminishes systematically as education increases. Among blacks, multiple job changing during the three years is less frequent for graduates than for dropouts, but within the group of dropouts the education-mobility relation is positive instead of negative. The same intercolor differences are apparent even if one focuses on the probability of many (five or more) interfirm shifts.

The hypothesized intercolor difference in rate of interfirm movement is not universally supported. Black graduates are, indeed, more likely than their white counterparts to have changed jobs at least once and more likely to have made multiple changes. However, among those who left school prior to high school graduation this intercolor difference prevails only for those with exactly 11 years of schooling.

Geographic movement was also expected to differ as between high school dropouts and graduates. The data seem to indicate that dropouts are more likely than graduates to have moved geographically, though the relationship is not apparent in each length-of-exposure category nor

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12 Parnes et al., The Pre-Retirement Years, 2:19.

13 Kohen and Parnes, Career Thresholds, 3:80-83; and Parnes et al., Career Thresholds, 1:151-53.

Table 2.15 Number of Interfirm Shifts Since 1966, by Highest Year of School Completed and Color: Youth Who Had Completed 12 or Fewer Years of School[a]

(Percentage distribution)

Number of interfirm shifts since 1966	9 or less	10	11	Total, 11 or less	12
	WHITES				
0	17	19	34	21	44
1	22	24	27	24	22
2	12	20	15	14	15
3	15	15	10	14	9
4	11	8	6	9	5
5 or more	22	14	8	17	6
Total percent	100	100	100	100	100
Total number (thousands)	725	298	303	1,326	1,737
	BLACKS				
0	27	24	19	25	26
1	18	20	12	17	27
2	18	18	18	18	16
3	10	15	22	14	12
4	9	5	5	7	11
5 or more	18	19	23	19	8
Total percent	100	100	100	100	100
Total number (thousands)	226	71	71	368	236

a See note a, Table 2.9, p. 33.

is it monotonic according to years of schooling (Table 2.16). The greatest disparity in the frequency of geographic movement, for whites and blacks alike, is between young men with fewer than 10 years of schooling and those with high school diplomas. This result does suggest that young men with the least favorable employment experiences and outlooks may utilize geographic movement in order to improve their situations. Finally, among the subset of the sample considered in this chapter, there is no evidence of a systematic difference in rate of migration between whites and blacks.

Extent and Type of Occupational Training

The likelihood of having received occupational training outside regular school between the 1966 and 1969 surveys is positively related both to the number of years of school completed and, in the case of whites, to the number of years since the young man left school (Table 2.17). White high school graduates were more likely than their black counterparts to have engaged in a training program, but among the dropouts there is no clear-cut relationship.

Attitudes

In addition to the behavioral and experiential differences which distinguish high school graduates from nongraduates, it was expected that attitudes related to labor market experience would also differ between the two groups. Two such attitudinal measures are considered here. First, it was anticipated that graduates would exhibit a stronger commitment to the work ethic than would nongraduates.[14] It is impossible to put this into an unambiguous causal framework because it is clear that attitudes may condition experience which, in turn, may affect attitudes. Thus, the expectation of stronger commitment on the part of graduates is based on both their additional schooling and their more favorable work experiences.

Generally speaking, young white and young black men who graduated from high school are, in fact, slightly more likely than dropouts to manifest a strong commitment to work (Table 2.18). Among whites the extent of commitment appears to increase with increasing exposure to the labor market, but more so for graduates than for dropouts. Among blacks, no association between commitment and labor market exposure is discernible. As a consequence, the intercolor difference in commitment grows with time for both graduates and dropouts.

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14 Measurement of commitment to work is described on p. 28 above.

Table 2.16 Migration Rate[a] 1968 to 1969, by Survey Date Last Enrolled, Highest Year of School Completed and Color: Youth Who Had Completed 12 or Fewer Years of School and Were Interviewed All Four Years[b]

Survey date last enrolled and highest year of school completed	WHITES		BLACKS	
	Total number (thousands)	Percent migrants[a] 1968 to 1969	Total number (thousands)	Percent migrants[a] 1968 to 1969
1968				
11 or less	90	c	59	12
12	615	7	78	4
1967				
11 or less	143	7	45	9
12	411	4	53	4
1966				
11 or less	142	6	40	5
12	188	10	37	11
Before 1966				
9 or less	716	12	198	8
10	294	6	64	0
11	294	9	63	0
12	1,703	4	222	4

a Migration rate is the percent who changed county (or SMSA) of residence at least once during the time period.

b This is a further restriction of the universe described in note b, Table 2.1, p. 21.

c Percentage not shown where base represents fewer than 25 sample cases.

Table 2.17 Extent of Occupational Training Received Since 1966, by Survey Date Last Enrolled, Highest Year of School Completed and Color: Youth Who Had Completed 12 or Fewer Years of School[a]

(Percentage distribution)

Extent of occupational training since 1966	Last enrolled 1966-1968		Last enrolled before 1966	
	11 or less	12	11 or less	12
	WHITES			
No training	78	62	75	50
One program	13	33	18	39
Two or more programs	8	5	7	10
Total percent	100	100	100	100
Total number (thousands)	387	1,243	1,326	1,737
	BLACKS			
No training	72	70	80	56
One program	20	27	13	34
Two or more programs	7	3	6	10
Total percent	100	100	100	100
Total number (thousands)	152	174	368	236

a See note a, Table 2.9, p. 33.

Table 2.18 Commitment to Work,[a] by Highest Year of School Completed, Survey Date Last Enrolled and Color: Youth Who Had Completed 12 or Fewer Years of School[b]

(Percentage distribution)

Commitment to work[b]	Last enrolled 1966-1968		Last enrolled before 1966	
	11 or less	12	11 or less	12
	WHITES			
High	77	78	81	88
Low	19	17	16	10
Uncertain	3	4	3	2
Total percent	100	100	100	100
Total number (thousands)	387	1,243	1,326	1,737
	BLACKS			
High	72	78	72	80
Low	18	18	22	18
Uncertain	10	3	6	2
Total percent	100	100	100	100
Total number (thousands)	152	174	368	236

a Measurement of commitment to work is described on p. 28 above.
b See note a, Table 2.9, p. 33.

The second attitudinal or personality trait which was expected to vary as between high school graduates and dropouts is perceived locus of control--i.e., the extent to which a youth perceives that he controls his own fate rather than being controlled by forces external to himself. This trait is measured by the score on an 11-item test adapted from the original 23-item Internal-External (I-E) test devised by the psychologist Julian Rotter.[15] Our interest in this personality trait is based on the assumption that an individual's sense of personal efficacy will both influence his labor market behavior and be influenced thereby. For example, a young man who perceives that he is in control of his destiny should be more likely than one who does not to seek ways to improve his economic position. In addition, young men who have had unfavorable labor market experiences may well develop a sense of alienation or a sense of lack of control over their own lives.

Table 2.19 presents two measures of the I-E variable. First is the proportion of the group who are defined as "internal" (i.e., those who most strongly believe that they control their own fate) and the proportion who are defined as "external" (i.e., those who most strongly believe that their fate is decided by forces outside their personal control).[16] Second, the median score for each group is shown, the range of scores being from 11 to 44.

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15 Internal versus external control has been defined in the following way: "Internal control refers to the perception of positive and/or negative events as being a consequence of one's own action and thereby under personal control; external control refers to the perception of positive and/or negative events as being unrelated to one's own behavior in certain situations and therefore beyond personal control" (H. M. Lefcourt, "Internal Versus External Control of Reinforcement: A Review," Psychological Bulletin 65 (1966):206). For a discussion of the concept, the original Rotter scale, and a review of research findings using the scale, see Julian B. Rotter, "Generalized Expectancies for Internal Versus External Control of Reinforcement," Psychological Monographs 80, no. 609 (1966). For a discussion of the abbreviated Rotter scale and its scoring procedure, see Appendix F.

16 The percent internal is defined as the percent with scores below 21 and the percent external is defined as the percent with scores above 25. These cutting points were dictated, in part, by the interval coding of the measure of these tabulations, which were designed before careful analysis of the distribution of the measure was possible. Examination of this distribution reveals that it is approximately normal, with some rightward skew. The mean and standard deviation of the score for a large subset of the entire sample (about 2,500 individuals) were 21.8 and 5.0, respectively.

Table 2.19 Perceived Locus of Control 1968,[a] by Survey Date Last Enrolled, Highest Year of School Completed and Color: Youth Who Had Completed 12 or Fewer Years of School[b] and Were Interviewed in 1968

Survey date last enrolled and highest year of school completed	Total number (thousands)	Percent internal[a]	Percent external[a]	Median score[c]
	WHITES			
1968				
11 or less	93	33	24	22.1
12	615	45	22	20.8
1967				
11 or less	143	41	26	21.2
12	411	33	31	22.4
1966				
11 or less	146	28	34	23.2
12	193	36	34	22.4
Before 1966				
9 or less	716	38	32	22.0
10	298	35	26	21.9
11	294	56	15	19.1
12	1,719	52	16	19.7
	BLACKS			
1968				
11 or less	60	27	44	22.1
12	78	22	55	22.6
1967				
11 or less	44	15	43	24.6
12	53	31	31	23.5
1966				
11 or less	43	20	56	25.4
12	37	25	65	26.9
Before 1966				
9 or less	211	15	61	26.3
10	66	31	47	24.3
11	66	35	46	24.0
12	224	36	30	22.1

a Internal = percent with scores 11-20; external = percent with scores 26-44. See note 16, p. 48.

b This is a further restriction of the universe described in note b, Table 2.1, p. 21.

c Computed from grouped data.

By and large, the two measures yield the same inferences. Educational attainment seems to be positively associated with a strong sense of personal efficacy, but the association is not perfectly regular. Among blacks out of school four or more years, there is a monotonic decline in the median score and in the percent with external (i.e., high) scores as years of schooling increases; likewise the percent with internal (i.e., low) scores increases monotonically. For the corresponding group of whites the regularity is absent but the trend is still discernible, e.g., high school graduates are only half as likely as those with less than 10 years of education to be classified as external and are one-third more likely to be classified internal. Since the test was administered at least two years after this group left school, it is not possible to be certain of causal direction. However, it seems plausible that both more schooling and more favorable labor market experience contribute to the greater sense of personal control expressed by the high school graduates. Among youth with less than four years of labor market exposure, the association between schooling and perceived locus of control is quite erratic.

CHAPTER THREE*

LABOR MARKET EXPERIENCES OF OUT-OF-SCHOOL YOUTH

I INTRODUCTION

This chapter focuses on several aspects of the labor market experience of that subset of our sample who have been out of school at each of the four survey dates.[1] Earlier reports in this series have documented the considerable volatility which characterizes the labor market behavior of men in this age group.[2] Our examination of the dynamics of labor market experience begins, in Section II below, with a focus on changes in labor force and employment status between the first (1966) and fourth (1969) surveys. Section III contains a brief description and analysis of the patterns of interfirm movement between 1966 and 1969. In order to be able to differentiate between voluntary and involuntary job changes, we direct our attention in Section IV to the 24-month period between the 1967 and 1969 interviews.[3] In Section V we describe broad patterns of occupational change between first job after leaving school and the jobs held in 1966 and 1969. The relation between these patterns and expressed occupational aspirations is also examined. The magnitude and correlates of changes in hourly rate of pay are the subject matter of the sixth and final section.

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* This chapter was written by Andrew I. Kohen.

1 Further restrictions of the universe under study--e.g., by employment status in selected survey weeks--are noted for the relevant sections below.

2 See, for example, Kohen and Parnes, Career Thresholds, 3:71-102.

3 An unfortunate error in the "skip pattern" in the second interview schedule precludes differentiation of voluntary from involuntary job changes between the first and second surveys. The information about movement between the second and third and between the third and fourth surveys was gathered in the fourth interview. See Appendix G, Items 36, 40 and 42.

II PATTERNS OF LABOR FORCE AND EMPLOYMENT STATUS 1966-1969

Labor Force Participation

From one perspective, the young men under consideration exhibit substantial stability of labor force participation. Overall, more than 95 out of every 100 were in the labor force at the time of all four of the surveys (Table 3.1). However, the simple stratification by age and color reveals considerable longitudinal change which is attributable to "aging."[4] For both color groups the net increase in participation rate is larger for younger men, or as we have noted before, the "aging" effect seems to diminish with age.[5] Among whites there is no net change visible for the group who were 22 to 27 years of age in 1969; whereas, the rate for those 17 to 21 rose by 1.6 percentage points. Because both of the corresponding figures for blacks are larger, the overall intercolor difference in participation in favor of whites which prevailed in 1966 has virtually disappeared by 1969.

Unemployment

The major change in the external economic environment which occurred between the 1968 and 1969 surveys of the group of men under study is very evident in the data on survey-week unemployment rates. The substantial reduction in the demand for labor occasioned by federal anti-inflationary measures beginning in the second quarter of 1969 resulted in a reversal of the trend of declining rates of joblessness for this group. Irrespective of age or color, the 1969 rate of unemployment was higher than that recorded in 1968 (Table 3.2). Thus, the deterioration of labor market conditions was sufficient to swamp the beneficial effect of increased labor market exposure which is evident from a comparison of the 1966-1968 rates of unemployment. Even so, the youngest of the group (i.e., those who were 14 to 18 years of age in 1966) still register a substantial decline in the extent of joblessness between 1966 and 1969, i.e., declines of 3.1 and 5.7 percentage points among whites and blacks, respectively.

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4 Of course, we do not mean to imply that the mere increase in chronological age produces increased labor force participation. Rather, age is a proxy for increased maturation, labor market experience and general stability of work habits which lead to greater participation.

5 See Kohen and Parnes, Career Thresholds, 3:17. It should be noted, however, that there is less room for increased participation among the older youth because their rate was initially higher and much closer to 100 percent.

Table 3.1 Survey-Week Labor Force Participation Rate For Out-of-School Youth, by Survey Year, Age in 1969 and Color[a]

Survey year	WHITES			BLACKS		
	17-21	22-27	Total	17-21	22-27	Total
1966	91.9	98.1	97.4	89.3	94.6	93.6
1967	89.5	98.6	97.5	91.2	98.2	96.9
1968	93.9	97.7	97.2	93.2	96.8	96.1
1969	93.5	98.2	97.6	93.3	97.7	96.9
Net change (1969 minus 1966)	+1.6	+0.1	+0.2	+4.0	+3.1	+3.3
Total number in population (thousands)	429	3,163	3,592	118	507	622

a Unless further restricted, all tables in this chapter refer to youth 17 to 27 years of age in 1969 who were out of school at the time of the 1966, 1967, 1968 and 1969 surveys.

Table 3.2 Survey-Week Unemployment Rate for Out-of-School Youth,[a] by Survey Year, Age in 1969 and Color

Survey year	WHITES			BLACKS		
	17-21	22-27	Total	17-21	22-27	Total
1966	7.5	1.7	2.4	11.5	3.6	5.0
1967	2.9	1.1	1.3	14.1	5.0	6.6
1968	0.7	0.6	0.6	4.5	2.6	2.9
1969	4.4	1.8	2.1	5.8	6.4	6.3
Net change (1969 minus 1966)	-3.1	+0.1	-0.3	- 5.7	+2.8	+1.3
Total number in labor force (thousands)						
1966	394	3,105	3,499	103	480	583
1967	392	3,120	3,512	105	498	603
1968	403	3,075	3,478	107	491	598
1969	401	3,106	3,507	107	495	602

a See note a, Table 3.1 above.

Comparative Labor Force Status

A somewhat different perspective on labor force status over the four-year period is depicted in Table 3.3, which contains percentage distributions of the cohort according to comparative survey-week status. The positive effects of age and education on employment are very evident. Among whites, for example, about four-fifths of the high school graduates 17 to 21 years of age were employed at each survey date as compared to (1) only two-thirds of their age-counterparts with fewer than 12 years of schooling or (2) more than nine-tenths of their schooling-counterparts 22 and older. The data also clearly illustrate that unemployment is a more widely shared experience than is implied by any single survey-week's unemployment rate. Irrespective of color or age, the probability that a young man was unemployed at the time of at least one of the surveys is twice as great as the highest survey-week unemployment rate. For example, among blacks 17 to 21 years of age the highest survey-week rate was 14.1 percent and more than 30 percent of the group were unemployed at one or more of the survey dates. Furthermore, most of those classified as unemployed at one or more survey dates were actually unemployed at only one survey date.

III INTERFIRM MOVEMENT 1966-1969

As is well documented, the early years of a young man's labor market experience are characterized by considerable flux, especially as between employers. In this section we examine some correlates of job changing over the period between the 1966 and 1969 surveys. Because of an oversight in the early interview schedules we are unable to differentiate between voluntary and involuntary changes. As a consequence, the discussion is abbreviated, but in the next section we introduce this important dimension of job changing for the period between the 1967 and 1969 interviews.

Extent of Movement

During the 36-month period between the initial and fourth surveys about three-fifths of the white and seven-tenths of the black young men made at least one interfirm shift (Table 3.4).[6] These figures are

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6 Interfirm movement is defined by pair-wise comparison of current or last employer at successive survey dates. Thus, some respondents who made interfirm shifts may be with the same employer in 1969 as in 1966.

Table 3.3 Comparative Survey-Week Labor Force and Employment Status, 1966 Through 1969, by Age in 1969, Highest Year of School Completed and Color: Out-of-School Youth Interviewed All Four Years[a]

(Percentage distribution)

Comparative labor force and employment status 1966-1969	17-21		22-27			
	Less than 12	12	Less than 12	12	13-15	16 or more
	WHITES					
In labor force all 4 years[b]	78	94	93	96	96	98
Employed all 4	66	79	87	93	92	98
Unemployed 1-3	12	15	6	3	4	0
In labor force 1-3 years	19	6	6	3	4	2
Employed all years	19	6	6	3	4	2
Unemployed one or more	0	0	0	1	1	0
Out of labor force all 4 years	3	0	1	1	0	0
Total percent	100	100	100	100	100	100
Total number (thousands)	253	156	1,056	1,563	317	209
	BLACKS					
In labor force all 4 years[b]	78		87	95		
Employed all 4	61		72	88		
Unemployed 1-3	17		15	7		
In labor force 1-3 years	22	c	12	5	c	c
Employed all years	13		6	1		
Unemployed one or more	9		6	4		
Out of labor force all 4 years	0		1	0		
Total percent	100		100	100		
Total number (thousands)	76	29	266	194	25	5

a This is a further restriction of the universe described in note a, Table 3.1, p. 53.

b There were no instances of youth unemployed at each of the four surveys.

c Percentage distribution not shown where base represents fewer than 25 sample cases.

Table 3.4 Extent of Interfirm Movement 1966-1969, by Age in 1969 and Color: Employed Out-of-School Youth[a]

(Percentage distribution)

Number of interfirm shifts between 1966 and 1969 surveys	WHITES			BLACKS		
	17-23	24-27	Total 17-27	17-23	24-27	Total 17-27
0	34	46	42	21	38	32
1	31	29	30	29	32	31
2	23	17	19	29	23	25
3	12	8	9	21	7	13
Total percent	100	100	100	100	100	100
Total number (thousands)	1,045	2,215	3,260	202	302	503

a Unless further restricted, the universe for the tables in Section III (i.e., 3.4 to 3.6) is youth 17 to 27 years of age in 1969 who were out of school at the time of the 1966, 1967, 1968 and 1969 surveys and were employed at both the 1966 and 1969 survey dates. Interfirm movement is defined in terms of pair-wise comparisons of current or last employer at successive survey dates. Thus, some respondents who made interfirm shifts may be with the same employer in 1969 as in 1966. Further, the number of shifts is doubtless understated because multiple shifts between two successive surveys are ignored. Finally, there is additional downward bias resulting from attrition, i.e., young men who dropped out of the sample since 1966 because they could not be located probably had above-average rates of interfirm mobility.

only slightly higher than the comparable rates of movement between the 1966 and 1968 surveys,[7] confirming the generalization that interfirm movement is a repetitive phenomenon. Additional evidence to this effect is that about half of the youth who moved at all changed employers at least twice.

Correlates of Movement

The likelihood of changing employers is strongly associated with a youth's age and color. Irrespective of color, interfirm movement declines with age, and irrespective of age, blacks exhibit higher rates of movement than whites (Table 3.4). These relationships appear to be attributable to the greater incidence of multiple movers in both cases. That is, blacks are no more likely than whites to have made exactly one interfirm shift, and men over 23 are no more likely than those 23 and under to have moved exactly once.

In order to examine these age and color differences more closely, we have further subdivided the young men according to other characteristics which are related to age and color on the one hand, and to the likelihood of interfirm movement, on the other. One such characteristic is occupation, and it is clear from the data that there is considerable occupational variation in the extent of movement over the three-year period (Table 3.5). In general, there is a negative association between the socioeconomic level of the occupation held by the youth in 1966 and either (1) the proportion who made at least one employer change or (2) the proportion who made two or more changes. It seems likely that much of this difference is attributable to the higher incidence of involuntary separation among those near the bottom of the occupational ladder. For example, young white men in nonfarm laborer jobs were twice as likely as those in white-collar positions to have made two or more interfirm shifts in the period. Among blacks, the highest rates of multiple moves are recorded for those in service and farm occupations.

Finally, there is substantial evidence that those who change employers improve their economic position relative to nonchangers. Irrespective of color or educational attainment, men who made at least one interfirm shift between 1966 and 1969 experienced a higher mean relative increase in hourly rate of pay than did those who remained with the same employer throughout the period (Table 3.6). Furthermore, though job changers generally began the period with lower average wage rates and thus would be expected to experience greater percentage gains than nonchangers, the percentage gains were so much greater that

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7 Kohen and Parnes, Career Thresholds, 3:78.

Table 3.5 Extent of Interfirm Movement between 1966 and 1969, by Age in 1969, Occupation of 1966 Job and Color: Employed Out-of-School Youth[a]

Age in 1969 and 1966 occupation	Total number (thousands)	Percent making	
		1 interfirm shift	2 or more interfirm shifts
	WHITES		
17-23			
White collar	156	23	22
Craftsmen	221	32	32
Operatives	439	36	35
Nonfarm laborers	130	18	56
Service/Farm	96	34	32
Total or average	1,045	31	35
24-27			
White collar	645	31	17
Craftsmen	552	30	31
Operatives	661	30	27
Nonfarm laborers	133	23	42
Service/Farm	196	21	13
Total or average	2,215	29	25
	BLACKS		
17-23			
White collar	8	b	b
Craftsmen	10	b	b
Operatives	73	29	42
Nonfarm laborers	29	b	b
Service/Farm	78	26	57
Total or average	202	29	50
24-27			
White collar	37	50	23
Craftsmen	57	39	35
Operatives	101	24	22
Nonfarm laborers	44	30	36
Service/Farm	60	27	40
Total or average	302	32	30

a See note a, Table 3.4, p. 56.
b Percentage not shown where base represents fewer than 25 sample cases.

Table 3.6 Comparison of Hourly Rate of Pay 1966 and 1969, by Highest Year of School Completed, Extent of Interfirm Movement 1966-1969 and Color: Out-of-School Youth Employed as Wage and Salary Workers 1966 and 1969[a]

Highest year of school completed[c] and extent of interfirm movement	Total number (thousands)	Mean hourly rate of pay (dollars)		Mean percentage increase rate of pay, 1966 to 1969[b]
		1966	1969	
	WHITES			
Less than 12				
No shifts	291	2.47	3.24	35
1 shift	281	1.99	3.24	83
2 shifts	193	2.02	3.10	67
3 shifts	193	2.39	3.18	48
12				
No shifts	694	2.61	3.58	46
1 shift	357	2.53	3.60	58
2 or more shifts	316	2.61	3.61	52
13 or more				
No shifts	200	2.99	4.35	50
1 or more shifts	237	2.70	4.09	61
	BLACKS			
Less than 12				
No shifts	74	1.49	2.13	55
1 shift	49	1.76	2.58	74
2 or more shifts	86	1.41	2.15	97
12				
No shifts	60	2.01	2.81	43
1 shift	76	2.12	3.09	61
2 or more shifts	57	1.51	2.62	81

a This is a further restriction of the universe described in note a, Table 3.4, p. 56.

b Computed as the mean value of $\left[100\left(\frac{\text{1969 wage}}{\text{1966 wage}}\right) - 100\right]$.

c The number of blacks with 13 or more years of schooling is too small to permit its division into extent-of-movement groups.

1969 rates of pay were much more nearly equal than 1966 rates. In essence this is confirmation of the findings of our study of wage changes for this cohort over a shorter period of time.[8]

In addition, the data for young white men, but not for blacks, suggest that there are "diminishing returns to mobility." That is, the relative and absolute improvement in hourly rate of pay is greater for those who made only one interfirm shift than for those who made two or more shifts. The results are most striking among whites with less than 12 years of education, where the increase in average hourly earnings was $1.25 for those who made one employer change, $1.08 for those who made two changes and $.79 for those who made three changes. It is probable that at least part of this relation is a reflection of proportionately more involuntary movers among those who changed employers more than once. Nonetheless, it is rather surprising that the data for young black men do not reflect the same pattern.

IV INTERFIRM MOVEMENT 1967-1969

Extent and Nature

Approximately one-half of the out-of-school youth who were employed as wage and salary earners in 1967 had changed employers by the time of the 1969 survey.[9] As would be expected, the proportion who changed during this 24-month period is smaller than the percent who changed during the 36-month period between the 1966 and 1969 surveys,

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8 Kohen and Parnes, Career Thresholds, 3:85-88.

9 This includes those who had become self-employed. It should be noted that this measure of interfirm mobility refers to job changers rather than to number of changes. As indicated in note 6 above, movement is defined by pair-wise comparisons of employers at successive survey dates. Only if there was no change in both the 1967-68 and 1968-69 comparisons is the respondent coded as having remained with the same firm between 1967 and 1969. Thus, the variable overstates the extent to which respondents were employed with different employers at the 1967 and 1969 survey dates because those who left the 1967 employer and returned are classified as having changed employers. On the other hand, there is also a downward bias resulting from attrition. Young men who dropped out of the sample since 1967 because they could not be located probably had above-average rates of interfirm mobility.

as reported in the preceding section. Among whites, about four-fifths of the 1967-69 job changes were voluntary, while the corresponding proportion among blacks is three-fifths.[10] Comparing these results to findings for a cohort of middle-aged men generated in approximately the same manner indicates that a larger proportion of job changes by young men than by older men are voluntary.[11] Though hardly surprising, this provides further justification for characterizing the early years of labor market behavior as "experimental." Finally, the overall rate of interfirm movement is higher among black than among white youth, and this difference is entirely attributable to the higher rate of involuntary separation for blacks. The pervasiveness of this intercolor difference is investigated in greater detail below.

Antecedents of Movement

Tenure in 1967 job A fundamental tenet of labor mobility is that rates of both voluntary and involuntary job movement decline dramatically with increasing job tenure. Voluntary quit rates are very high during the first few months of service because this is usually sufficient time for the employee to realize that he erred in taking the job. Beyond this period the likelihood of a voluntary separation diminishes with time as the worker builds equity in his job (e.g., seniority rights) and develops strong social and psychological ties to the work place. Involuntary separations are also very high during the first few months of a new job, which are generally acknowledged to be probationary in order to allow employers to discover their mistakes in selection. Involuntary changes tend to decline as length of service increases due to the protection that seniority provides the worker against layoffs.

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10 Because this investigation is not limited to young men employed at all three (i.e., 1967, 1968 and 1969) surveys, two somewhat different procedures were used to differentiate voluntary from involuntary movement. For those who were employed at all three survey dates, the reason for leaving the 1967 job is coded. For those who were not employed at the middle date, the reason for leaving the most recent job prior to that survey is coded. Two types of reasons for separation from a job are not coded as either voluntary or involuntary, but are included in table columns titled "Total percent changers." These reasons are entrance to military service and institutionalization.

11 The proportion of job shifts over a three-year period which were voluntary was three-fifths among men 45 to 59 years of age in 1966. See Herbert S. Parnes, Gilbert Nestel, and Paul Andrisani, The Pre-Retirement Years, vol. 3, U.S. Department of Labor, Manpower Research Monograph no. 15 (Washington: U.S. Government Printing Office, forthcoming).

The data in Table 3.7 are largely consistent with the reasoning above. Among white men with less than one year of service in their 1967 jobs, the rate of voluntary job changing was twice that of men who had three or more years of tenure, i.e., 49 versus 24 percent. The relative difference in involuntary movement rates is even more dramatic, i.e., the rate among those with less than a year's service is seven times the rate of those with at least three years of service. In the case of black men the difference is also apparent, though not quite as regular.

The data further indicate that only a small part of the intercolor difference in rates of job separation results from an intercolor difference in tenure, i.e., from the fact that blacks are somewhat more likely than whites to have been short-service workers as of 1967. In fact, the black/white disparity in the rate of job changing is greatest among men with three or more years of tenure on the 1967 job. Within this group, blacks were six times as likely as whites to have departed involuntarily from their 1967 jobs (12 versus 2 percent) and also somewhat more likely to have left voluntarily.

Because of the demonstrated pronounced effect of tenure on the probability of job changing, and because tenure is also correlated with most of the other variables whose relationships to job changing are investigated below, the remaining analysis in this section controls for length of service in 1967 job.

Occupation and education There is considerable variation by occupation in the likelihood of interfirm movement between 1967 and 1969. On average, blue-collar workers were much more likely than white-collar workers to have made an employer change, even controlling for tenure on 1967 job (Table 3.7). In addition, there is an interesting interaction between occupation and length of service in their effects on the probability of a job shift. To illustrate, it can be seen, among whites, that the difference between operatives and craftsmen in the probability of changing jobs increases with tenure. For those with less than one year's service the difference is negligible (1 percentage point, but for those with at least three years of service craftsmen were only three-fifths as likely as operatives to have changed employers. Furthermore, among short-service workers (i.e., less than one year) occupational differences in overall movement rates are almost solely attributable to occupational differentials in the rate of involuntary separations. In contrast, among young men with at least three years of service, the overall differences appear to be the result of differential rates of voluntary movement. Controlling for 1967 occupation and tenure simultaneously also indicates that some portion, but not all, of the intercolor difference in rate of job changing can be attributed to the intercolor difference in occupational distribution, i.e., to blacks being more concentrated than whites in those occupation groups typified by high rates of interfirm movement.

Table 3.7 Proportion Changing Employer between 1967 and 1969 Surveys, by Reason for Leaving 1967 Job,[a] Length of Service and Occupation on 1967 Job and Color : Out-of-School Youth Employed as Wage and Salary Workers in 1967 and Employed in 1969[b]

Length of service and occupation on 1967 job	WHITES				BLACKS			
	Total number (thousands)	Percent changing			Total number (thousands)	Percent changing		
		Voluntarily	Involuntarily	Total		Voluntarily	Involuntarily	Total
Less than 1 year								
Professional, technical	92	47	10	58	1	e	e	e
Other white collar[c]	189	50	7	57	11	e	e	e
Craftsmen	338	47	16	64	31	39	10	54
Operatives	369	50	15	65	87	34	35	72
Nonfarm laborers	131	47	29	76	55	46	25	71
Total or average[d]	1,235	49	15	64	230	40	25	67
1-2 years								
Other white collar[c]	202	32	0	32	7	e	e	e
Craftsmen	204	23	12	38	15	e	e	e
Operatives	453	40	4	44	74	23	11	34
Total or average[d]	1,146	34	4	39	156	28	12	40
3 or more								
Other white collar[c]	193	16	0	16	10	e	e	e
Craftsmen	143	18	3	22	10	e	e	e
Operatives	192	33	2	35	45	32	3	35
Total or average[d]	689	24	2	26	101	31	12	45
Total or average	3,131	38	8	46	512	34	18	54

a For definition of measure of employer change and reason for leaving, see text notes 9 and 10, pp. 60 and 61.

b Unless further restricted, the universe for tables in Section IV (i.e., 3.7-3.15) is youth 17 to 27 years of age in 1969 who were (1) out of school at the time of the 1966, 1967, 1968 and 1969 surveys, (2) employed as wage and salary workers at the 1967 survey and (3) employed at the 1969 survey.

c Includes managerial, clerical and sales occupations.

d Includes occupations not shown separately.

e Percentages not shown where base represents fewer than 25 sample cases.

It is clear that occupational differences in the rate of interfirm movement, even within a narrow age range and controlling for tenure, do not fully capture the relationship between mobility and skill level. In an attempt to examine this relationship we further subdivide the young men under study according to educational attainment. Because of small sample sizes, the education-movement association, controlling for tenure, can be examined only for those who were blue-collar workers in 1967. It was expected that educational attainment, as a proxy for skill level, would be negatively related to the rate of interfirm movement mainly because of the involuntary component thereof. That is, lower skilled workers are typically more subject to layoff, presumably because they are more substitutable at the margin.

Although the data support the hypothesized negative relation between education and overall probability of changing employers, the association is almost entirely attributable to a difference in the rate of voluntary movement (Table 3.8). For blue-collar workers in general there is no significant difference in the rate of involuntary movement between high school graduates and those with less schooling. This is also true when the group is further subdivided into craftsmen and operatives. However, with only one exception (i.e., black operatives with at least one year's tenure in 1967), each color-occupation-tenure category provides evidence that the probability of voluntary interfirm movement is higher among young men with fewer than 12 years of schooling than among high school graduates. While we cannot be sure at this point, these results suggest that less-skilled youth are more venturesome in their labor market behavior and perhaps more attentive to alternatives for improving their economic position.

Propensity to leave 1967 job In studying the process of job changing it is necessary to examine not only the objective characteristics of workers which make them more or less attractive to alternative employers but also the propensity of employer workers to change jobs in response to a perceived differential in economic rewards. We measure this propensity by the response to a hypothetical job offer which was posed to employed respondents at the time of the 1966 survey.[12] Because we are concerned here with the period between 1967 and 1969, the relationship between mobility propensity and actual interfirm movement is investigated only for those who had been with their 1967 employer for at least one year. In doing this we are making the assumption that the propensity to leave the job did not change between 1966 and 1967 for those who remained with the same employer.

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12 For a detailed description of the coding of this measure and its cross-sectional correlates in 1966 see Parnes et al., Career Thresholds, 1:149-59.

Table 3.8 Proportion of Blue-Collar Workers[a] Changing Employer Between 1967 and 1969 Surveys, by Reason for Leaving 1967 Job, Length of Service and Occupation on 1967 Job, Highest Year of School Completed and Color

Occupation and length of service on 1967 job and highest year of school completed	WHITES				BLACKS			
	Total number (thousands)	Percent changing			Total number (thousands)	Percent changing		
		Voluntarily	Involuntarily	Total		Voluntarily	Involuntarily	Total
Craftsmen								
Less than 1 year								
Less than 12	154	64	15	79	13	b	b	b
Exactly 12	143	35	18	56	15	b	b	b
1 year or more								
Less than 12	124	28	14	42	12	b	b	b
Exactly 12	188	20	7	29	11	b	b	b
Operatives								
Less than 1 year								
Less than 12	209	59	11	70	47	43	32	75
Exactly 12	139	37	16	53	37	29	39	68
1 year or more								
Less than 12	252	42	0	42	49	20	12	32
Exactly 12	362	34	6	40	64	22	4	28
Total blue-collar[c]								
Less than 1 year								
Less than 12	442	59	16	75	100	53	26	79
Exactly 12	325	39	17	56	67	22	26	50
1 year or more								
Less than 12	408	40	4	44	80	26	10	36
Exactly 12	592	28	6	35	86	21	11	34

a This is a further restriction of the universe described in note b, Table 3.7, p. 63.

b Percentages not shown where base represents fewer than 25 sample cases.

c Includes nonfarm laborers not shown separately.

Clearly, this produces a conservative test of the predictive validity of our propensity measure. That is, if the measure is valid, then a disproportionate number of those classified in 1966 as "highly mobile" will not be analyzed here because they will already have changed jobs between 1966 and 1967, and the remainder of this group probably are not as "highly" mobile.[13]

The data indicate that the measure of mobility propensity has some predictive power among young white men, but not among blacks (Table 3.9). For whites the rate of voluntary job changing declines from 37 percent for the "highly mobile" to 28 percent for the "moderately mobile" and 26 percent for the "immobile." The differences are even more striking among blue-collar workers, especially operatives. In the latter occupational group the "highly mobile" were twice as likely as the "immobile" to have changed employers during the two-year period (50 versus 25 percent). The absence of a relationship between mobility and actual movement for white collar workers may be a result of the conservatism of the test noted above, or it may be the result of too heterogeneous an occupational grouping which "nets out" the behavior of professionals, clerical workers, and salesmen.

The results for blacks provide little support for the hypothesized relationship between the propensity to move and actual movement. Though the "immobile" were somewhat less likely than the "moderately mobile" to change jobs voluntarily, the lowest rate of changing is recorded for the "highly mobile" group.[14] Although the findings for blacks may be attributable to the conservative "bias" mentioned above, we plan to explore this further with more refined measures.[15]

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13 The "highly mobile" are those who indicated that they would change jobs for less than a 10 percent wage increase. Those who would change for an increase of 10 percent or more are classified as "moderately mobile," and those classified as "immobile" indicated that they would not change jobs for any conceivable wage increase.

14 These data also offer no confirmation for a speculation which we advanced in an earlier volume--viz. that the absence of the expected relation between propensity and a less refined measure of total movement for blacks was due to higher rates of involuntary movement for blacks. See Kohen and Parnes, Career Thresholds, 3:80.

15 We have reassessed mobility propensity in 1967 for those who changed jobs between 1966 and 1967, but the tabulations currently available do not permit examination of the subsequent behavior of this group.

Table 3.9 Proportion Changing Employer Between 1967 and 1969, by Reason for Leaving 1967 Job, Occupation on 1967 Job, Prospective Interfirm Mobility (as of 1966), and Color : Out-of-School Youth Having at Least One Year of Service on the 1967 Job[a]

Occupation on 1967 job and prospective interfirm mobility[b]	WHITES				BLACKS			
	Total number (thousands)	Percent changing			Total number (thousands)	Percent changing		
		Voluntarily	Involuntarily	Total		Voluntarily	Involuntarily	Total
White-collar								
Highly mobile	116	24	0	24	2	d	d	d
Moderately mobile	333	24	1	26	9	d	d	d
Immobile	82	d	d	d	14	d	d	d
Operatives								
Highly mobile	191	50	4	54	40	19	11	33
Moderately mobile	258	40	3	43	62	29	4	33
Immobile	151	25	3	28	7	d	d	d
Other blue-collar								
Highly mobile	104	33	11	44	8	d	d	d
Moderately mobile	194	17	7	24	42	27	26	53
Immobile	80	d	d	d	5	d	d	d
All occupations[c]								
Highly mobile	433	37	5	42	56	23	9	34
Moderately mobile	864	28	3	31	143	33	14	48
Immobile	341	26	5	32	36	26	3	29

a This is a further restriction of the universe described in note b, Table 3.7, p. 63.

b See text n. 13 for definition of prospective mobility variable and categories.

c Includes service and farm occupations not shown separately.

d Percent not shown where base represents fewer than 25 sample cases.

Job satisfaction expressed in 1967 Degree of satisfaction with the 1967 job is another subjective characteristic which we expected to be related to the probability of voluntary interfirm movement between 1967 and 1969. As has been shown elsewhere, satisfaction level is allied to, but distinct from, our measure of mobility propensity.[16] However, since the tabulations which are currently available do not contain simultaneous cross-classification of these variables with actual movement, we are precluded from examining their independent effects here. Nevertheless, it is worthwhile noting that young men who expressed a high degree of satisfaction with their jobs in 1967 were less likely to have changed employers voluntarily between 1967 and 1969 than those who reported lesser degrees of satisfaction (Table 3.10). Unlike our findings with regard to mobility propensity, the relationship is apparent among blacks as well as whites. For the latter color group the relationship is much more pronounced among men with at least one year's tenure, and is not evident among short-service (less than one year) operatives. Finally, it is worthy of note that for young white men who had been with their 1967 employer for at least one year, attitudinal change during the preceding year (i.e., between 1966 and 1967) is negatively related to the probability of subsequent voluntary separation. That is, those who liked their jobs more in 1967 than in 1966 exhibit a much lower rate of voluntary movement than do those whose attitude toward their jobs deteriorated between 1966 and 1967 (Table 3.11). The rate of voluntary job changing for men with unchanged attitudes lies between the two extremes.

Correlates and Consequences of Interfirm Movement

Amount of movement The number of interfirm shifts that a young man made during the two-year period under study is clearly related to the reason for having left the 1967 job. Men who left voluntarily were less likely to make several interfirm shifts than were those who were discharged from their 1967 positions (Table 3.12). Among whites, nearly half of the voluntary movers changed jobs only once as compared to only one-third of the involuntary movers. Among blacks, involuntary changers were somewhat more likely than voluntary changers to shift employers only once, but the former were half again as likely to shift four or more times.

Within the group of young men who left their 1967 jobs voluntarily it is also evident that short-service workers changed jobs more often than workers with at least one year of service. Indeed, the amount of "job-hopping" by the least-tenured group is quite striking--e.g., fully

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16 See Parnes et al., Career Thresholds, 1:155-56 and Parnes et al., Pre-Retirement Years, 3:37-39.

Table 3.10 Proportion of Employed Out-of-School Youth[a] Changing Employer between 1967 and 1969, by Reason for Leaving 1967 Job, Length of Service on and Selected Occupations of 1967 Job, Attitude toward 1967 Job and Color

Length of service on, occupation of, and attitude toward 1967 job	Total number (thousands)	Percent changing		
		Voluntarily	Involuntarily	Total
	WHITES			
Less than 1 year				
Operatives				
Liked job very much	248	50	10	60
Other	99	50	26	76
All occupations				
Liked job very much	809	47	13	60
Other	318	52	18	71
1 year or more				
White collar				
Liked job very much	406	20	2	22
Other	195	36	0	36
Operatives				
Liked job very much	360	32	2	34
Other	284	46	5	51
All occupations				
Liked job very much	1,194	25	4	29
Other	633	40	3	43
	BLACKS			
Less than 1 year				
All occupations				
Liked job very much	119	31	34	69
Other	81	46	13	60
1 year or more				
Operatives				
Liked job very much	51	8	10	18
Other	66	37	4	43
All occupations				
Liked job very much	127	24	9	33
Other	124	35	14	49

a See note b, Table 3.7, p. 63.

Table 3.11 Proportion Changing Employer between 1967 and 1969, by Reason for Leaving 1967 Job, Comparison of Attitude toward Job 1966-1967 and Color: Out-of-School Youth Having at Least One Year of Service on the 1967 Job[a]

Comparison of attitude toward job 1966-1967	Total number (thousands)	Percent changing		
		Voluntarily	Involuntarily	Total
	WHITES			
Liked job more 1967	673	23	5	29
Same	1,032	32	2	34
Liked job less 1967	104	57	5	62
	BLACKS			
Liked job more 1967	88	32	4	36
Same	146	28	16	45
Liked job less 1967	19	b	b	b

a This is a further restriction on the universe described in note b, Table 3.7, p. 63.

b Percentages not shown where base represents fewer than 25 sample cases.

Table 3.12 Number of Interfirm Shifts Between 1967 and 1969, by Reason for Leaving 1967 Job, Length of Service on 1967 Job and Color: Out-of-School Youth Who Changed Employers at Least Once Between 1967 and 1969[a]

(Percentage distribution)

Number of interfirm shifts 1967-1969	Left 1967 job voluntarily			Left 1967 job involuntarily		
	Less than 1 year of service	1 or more years of service	Total	Less than 1 year of service	1 or more years of service	Total
	WHITES					
1	40	55	46	24		35
2	20	29	24	30		27
3	17	11	15	27	b	21
4 or more	23	4	14	19		16
Total percent	100	100	100	100		100
Total number (thousands)	574	540	1,135	172	64	248
	BLACKS					
1	27	41	32	44		39
2	33	40	38	24		26
3	14	17	15	13	b	14
4 or more	25	2	14	19		21
Total percent	100	100	100	100		100
Total number (thousands)	90	71	169	58	27	91

a This is a further restriction of the universe described in note b, Table 3.7, p. 63.

b Percentages not shown where base represents fewer than 25 sample cases.

two-fifths of them had at least four employers during the 24-month period. Tabulations not shown here further indicate, as would be expected, that this "job-hopping" behavior is much more common among blue-collar workers than among white-collar workers.

Acquisition of training For certain groups of young men, interfirm movement occasions a considerable amount of training. Overall, about one-third of the whites and one-fifth of the blacks received some formal training during the period (Table 3.13). Though the aggregate figures exhibit no systematic variation in these proportions according to comparative job status, the aggregate figures net out some important patterns within certain subgroups. For example, among men with less than 12 years of schooling irrespective of color, those who changed employers were more likely to receive training than their counterparts who did not change employers.

Unemployment experience 1967-69 There are two reasons that we expected young men who changed employers during the 24 months to experience more unemployment than those who remained at the same job. First, the transition from one employer to another rarely is accomplished without some loss of work time; even most voluntary job shifts are the result of a search process which is seldom conducted while working. Second, men who have experienced unemployment in a job probably are both more likely to seek more stable alternatives and more likely to suffer permanent layoff.

The data in Table 3.14 are strong evidence in support of the expected relationship. Irrespective of color, young men who changed firms during the period experienced six times as much unemployment as those who remained with the same employer. For whites the absolute difference is nearly two weeks while for blacks it is nearly five weeks. Furthermore, the disparity prevails in each occupation-tenure classification in which sample sizes permit confident comparison. Because tenure is negatively related both to the amount of unemployment and the probability of job changing, the absolute difference in weeks unemployed between changers and nonchangers declines with length of service. With the exception of black operatives with less than a year's service, the data also suggest that involuntary job changers spend more time in unemployment than their counterparts who move voluntarily.

Change in earnings Some interesting patterns emerge from a comparison of the average annual earnings of job changers and nonchangers.[17] In order to focus sharply on the effects on earnings of

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17 The term "annual" refers to 12-month periods which are not coterminous with calendar years.

Table 3.13 Proportion of Out-of-School Youth[a] Receiving Formal Vocational Training Between 1967 and 1969, by Comparative Job Status 1967-1969, Occupation on 1967 Job, Highest Year of School Completed and Color

Occupation on 1967 job and highest year of school completed	Same employer 1967-1969		Left 1967 employer					
			Voluntarily		Involuntarily		Total	
	Total number (thousands)	Percent with training	Total number (thousands)	Percent with training	Total number (thousands)	Percent with training	Total number (thousands)	Percent with training
	WHITES							
White collar								
12	318	45	120	37	12	c	133	42
13 or more	187	66	122	67	16	c	136	67
Total or average[b]	556	50	289	51	29	c	317	53
Craftsmen								
Less than 12	106	17	129	14	41	c	170	15
12	192	44	79	c	34	c	121	44
Total or average[d]	353	38	226	26	83	c	316	26
Operatives								
Less than 12	208	13	230	24	24	c	255	24
12	276	46	171	40	41	c	212	40
Total or average[d]	503	31	423	33	76	c	499	33
Total[e]								
Less than 12	439	15	530	21	109	14	640	20
12	902	43	437	40	101	49	551	41
13 or more	281	60	167	64	37	c	204	60
Total or average	1,622	38	1,135	35	248	33	1,394	34
	BLACKS							
Craftsmen								
Total	27	32	23	c	13	c	37	29
Operatives								
Less than 12	46	16	26	c	23	c	52	20
12	54	17	25	c	17	c	43	29
Total or average[d]	100	16	58	34	39	26	102	29
Nonfarm laborers								
Total	33	9	34	25	16	c	50	20
Total[e]								
Less than 12	107	8	100	13	53.	21	158	15
12	106	29	51	27	36	39	89	31
Total or average[d]	226	22	169	20	91	29	267	23

a See note b, Table 3.7, p. 63.
b Includes those with less than 12 years of schooling.
c Percent not shown where base represents fewer than 25 sample cases.
d Includes those with more than 12 years of schooling.
e Includes occupational groups not shown separately.

Table 3.14 Mean Weeks Unemployed Between the 1967 and 1969 Surveys, by Comparative Job Status 1967-1969, Occupation and Length of Service on 1967 Job and Color: Out-of-School Youth[a]

Occupation and length of service on 1967 job	Same employer 1967-1969		Left 1967 employer					
			Voluntarily		Involuntarily		Total	
	Total number (thousands)	Mean weeks unemployed	Total number (thousands)	Mean weeks unemployed	Total number (thousands)	Mean weeks unemployed	Total number (thousands)	Mean weeks unemployed
	WHITES							
Professional, technical	182	0.3	102	0.3	17	b	119	0.5
Other white collar	369	0.0	187	1.2	12	b	198	1.1
Craftsmen								
Less than 1 year	111	0.0	144	1.0	51	b	199	1.3
1 year or more	231	0.8	71	b	28	b	104	1.1
Total or average	353	0.5	226	1.2	83	b	316	1.3
Operatives								
Less than 1 year	127	1.6	179	4.0	53	b	232	4.2
1 year or more	369	0.4	239	1.7	20	b	259	1.8
Total or average	503	0.7	423	2.7	76	b	499	2.9
All occupations								
Less than 1 year	419	0.7	574	2.7	172	5.0	754	3.3
1-2 years	680	0.5	381	1.3	48	b	434	1.4
3 or more years	496	0.1	159	0.7	15	b	174	0.8
Total or average	1,622	0.4	1,135	2.2	248	3.9	1,394	2.5
	BLACKS							
Craftsmen	27	1.6	23	b	13	b	37	11.9
Operatives								
Less than 1 year	24	b	29	6.6	31	4.0	62	5.1
1 year or more	72	0.1	28	3.0	8	b	37	4.0
Total or average	100	0.1	58	4.7	39	5.1	102	4.7
Nonfarm laborers	32	1.3	34	8.6	16	b	50	8.1
All occupations								
Less than 1 year	74	1.7	90	6.8	58	4.4	153	5.7
One year or more	142	0.7	71	1.6	27	b	100	4.2
Total or average	226	1.0	169	5.0	91	7.3	267	5.7

a See note b, Table 3.7, p. 63.
b Means not shown where base represents fewer than 25 sample cases.

a simple change of employers, the data are restricted to young men who did not change one-digit occupations between 1967 and 1969 and who had been with their 1967 employer for at least one year. With the exception of whites in white collar occupations, the earnings of job changers were lower than those of nonchangers during the 12-month period prior to the 1967 survey (Table 3.15). Further, the disparity seems to be widest between nonchangers and those who subsequently left their jobs involuntarily. These differences doubtless reflect both the greater unemployment and lower hourly wages of men who subsequently left their 1967 employers.

Among whites this difference in earnings also prevails for the 12-month period prior to the 1969 survey, even for voluntary job changers. Thus, despite the increase in hourly wages which typically accompanies an interfirm shift, the greater unemployment experienced by movers obviously serves to delay the returns (in terms of annual earnings) to mobility. Indeed, the percentage increase in average annual earnings between the 1966-67 and 1968-69 periods is noticeably smaller for movers, in spite of the fact that movers began with a lower base.

Among blacks, the data reveal a rather different picture. That is, movers appear to have eliminated the earnings differential by 1969 by virtue of the fact that the relative increase in their mean earnings is substantially greater than the corresponding increase for nonmovers. For blue-collar workers the absolute and percentage increases in average annual earnings were twice as high among job changers as among their counterparts who stayed with the same employer (i.e., $1,300 versus $660 and 28 versus 14 percent). Thus, it appears that the short-run returns to mobility in terms of hourly wages are relatively greater for blacks than for whites, because for blacks the returns more than offset the increased joblessness to produce higher annual earnings almost immediately, whereas this is not true for whites.

V OCCUPATIONAL CHANGE

This section, primarily descriptive rather than analytic, is intended to illustrate the broad patterns of occupational change among young men over different periods of time and to examine how these patterns vary according to a limited number of personal characteristics, namely color, age, and educational attainment. As in previous sections of the chapter the investigation focuses on men 17 to 27 years of age in 1969 who were not enrolled in school from the time of the 1966 survey through the time of the 1969 survey. Additionally, we restrict our attention to those who were employed at the initial and fourth survey dates.

Table 3.15 Mean Earnings[a] Between 1966 and 1967 Surveys and Between 1968 and 1969 Surveys, by Type of Occupation, Comparative Job Status 1967-1969 and Color: Employed Out-of-School Youth Having at Least One Year of Service on the 1967 Job Who Did Not Change One-Digit Occupations 1967 Through 1969

Type of occupation and comparative job status 1967-1969	Total number (thousands)	Mean earnings		
		1966-1967	1968-1969	Percent increase
	WHITES			
White collar				
Same employer	326	$6,480	$8,843	36
Different employer	93	7,673	9,032	18
Blue collar				
Same employer	464	6,491	8,273	27
Different employer	185	6,024	7,194	19
Voluntary mover	155	6,272	7,505	20
All occupations				
Same employer	845	6,484	8,501	31
Different employer	297	6,411	7,504	17
Voluntary mover	259	6,615	7,824	18
	BLACKS			
White collar				
Same employer	17	c	c	c
Different employer	11	c	c	c
Blue collar				
Same employer	68	$4,747	$5,407	14
Different employer	29	4,610	5,908	28
All occupations				
Same employer	111	4,659	5,628	21
Different employer	51	4,115	5,518	34
Voluntary mover	38	4,648	5,803	25

a Earnings include income from wages, salaries, tips, commissions and self-employment income.

b This is a further restriction of the universe described in note b, Table 3.7, p. 63.

c Means not shown where base represents fewer than 25 sample cases.

Net Occupational Movement

There is substantial occupational movement evidenced by the young men under study, whether one considers the time between the first job after leaving school and the job in 1969 or the shorter period between the 1966 and 1969 jobs (Table 3.16). The net changes over either period are generally upward in terms of socioeconomic level. The most obvious illustrations of this are the major decline in the proportion in farm occupations and the equally major increases in the proportion in professional and managerial positions. Even within the blue-collar category there is substantial growth in the percentage who are craftsmen and decline in the percent employed as laborers. The pattern of changes reflects the type of occupational progress which one would expect as careers develop.

The patterns of occupational progress of whites and blacks exhibit both similarities and differences. On the one hand, both color groups evidence substantial movement away from farm occupations and toward upper-level white-collar jobs. From some perspectives the intercolor difference in occupational distribution is smaller in 1969 than at the time of the first job after leaving school. That is, the sum of the deviations between the two percentage distributions is 66 percentage points in the case of the first job and only 61 points in the case of the 1969 job. This is attributable mainly to equalization of the proportions of the color groups occupying service and farm jobs. Also, the probability of a young white man being in a professional or managerial position on his first job was six times the corresponding probability for a young black, but by 1969 this relative difference is only 3.8:1.

On the other hand, there are very distinct intercolor differences in the pattern of occupational change which may be interpreted as a widening of the socioeconomic gap between the color groups.[18] First, the sum of the deviations of the percentage distributions rises between the 1966 and 1969 jobs. Second, although the relative intercolor difference in the proportion occupying high-level white-collar positions declines from first to 1966 to 1969 job, the absolute difference widens consistently (i.e., from 5 to 9 to 14 percentage points). Even within the blue-collar category the upward movement is more pronounced among whites than among blacks. The latter difference probably is attributable in part to the greater proportion of black than white migrants from farm jobs who were absorbed into urban labor markets very near the bottom of the occupational ladder.

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18 This conclusion was presaged in our initial report in this series. See Parnes et al., Career Thresholds, 1:195.

Table 3.16 Major Occupation Group of First, 1966 and 1969 Jobs, by Color[a]: Employed Out-of-School Youth

(Percentage distribution)

Major occupation group	WHITES			BLACKS		
	First job[b]	1966 job	1969 job	First job[b]	1966 job	1969 job
Professional, technical	5	8	8	1	2	4
Nonfarm managers and proprietors	1	4	11	0	1	1
Clerical	9	7	6	5	6	8
Sales	5	4	6	1	0	c
Craftsmen, foremen	13	24	25	5	13	14
Operatives	32	34	29	20	36	41
Nonfarm laborers	19	9	8	27	16	19
Service	5	4	4	22	16	8
Farm	11	6	4	19	11	6
Total percent	100	100	100	100	100	100
Total number (thousands)	3,482	3,482	3,482	553	553	553

a Unless further restricted, the universe for tables in sections V and VI (i.e., 3.16-3.23) is youth 17 to 27 years of age in 1969 who were out of school at the time of the 1966, 1967, 1968 and 1969 surveys and were employed at the 1966 and 1969 survey dates.

b Includes a small number (about 7 thousand) whose first job after school was in the armed services.

c Between 0.1 and 0.5 percent.

Two probable correlates of net occupational movement which are of interest in their own right and which may also serve to explain some of the intercolor differences are education and years of labor market experience. In some respects the black/white differences in these characteristics may be offsetting, because the lower educational attainment of blacks means that they potentially have accumulated more experience. Although the black men in this group are, indeed, less well-educated, they are also somewhat younger which means that the experience difference is not quite so large as would be implied by the education difference.[19]

The data in Table 3.17 reveal the expected patterns of occupational change when age is controlled. Irrespective of color, the men 24 and older exhibit more movement between the first and 1966 jobs than do the men under 24. This difference results mainly from the fact that the period of time between first and 1966 job is longer for the older group, though some of it may be due to the older group's higher level of educational attainment. Also, as expected, the younger group evidenced more occupational change than the older group between 1966 and 1969. This is a reflection of the fact that by 1966 a larger proportion of the older group had already settled into what will be lifetime occupations, whereas many of the younger men were still experimenting and occupying "apprentice"-level positions in 1966. Also, many of those in the younger group faced a wider set of occupational options by 1969, by which time they had "outgrown" the restrictions imposed by child-labor statutes.

Controlling for age also permits some interesting intercolor comparisons in occupational change. Among those 24 and older there is more disparity between blacks and whites in the occupational distributions of first jobs than in the distributions of 1969 jobs. That is, the sum of the deviations between the white and black distributions declines from 76 to 53 percentage points. Despite this convergence, blacks still hold noticeably lower positions in the occupational hierarchy, which

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19 Forty-two percent of the blacks were between 17 and 23 years of age in 1969, as compared to 35 percent of the whites. A similar but smaller age difference among out-of-school youth existed at the time of the initial survey. The difference seems to have widened as a result of higher attrition among the older blacks than among their white counterparts. Even controlling for age, the blacks are less well-educated than whites. For example, among those 17 to 23 only two-fifths of the blacks graduate from high school in contrast to nearly three-fifths of the whites. Among those 24 and older the intercolor difference is even greater, e.g., one in five whites attended college compared to one in twelve blacks.

Table 3.17 Major Occupation Group of First, 1966 and 1969 Jobs, by Age in 1969 and Color: Employed Out-of-School Youth[a]

(Percentage distribution)

Major occupation group	17-23			24-27		
	First job	1966 job	1969 job	First job	1966 job	1969 job
	WHITES					
Professional, technical	1	3	4	7	10	9
Nonfarm managers and proprietors	1	2	8	1	6	13
Clerical	6	7	8	11	7	6
Sales	5	2	6	5	6	6
Craftsmen, foremen	13	21	27	13	25	24
Operatives	37	40	29	30	30	28
Nonfarm laborers	20	13	12	19	7	6
Service	4	6	2	5	4	4
Farm	13	6	4	9	5	5
Total percent	100	100	100	100	100	100
Total number (thousands)	1,217	1,217	1,217	2,264	2,264	2,264
	BLACKS					
Professional, technical	b	0	2	1	4	5
Nonfarm managers and proprietors	0	0	b	0	2	1
Clerical	6	4	9	5	6	7
Sales	b	0	0	1	0	b
Craftsmen, foremen	4	5	9	6	18	19
Operatives	26	38	40	16	35	42
Nonfarm laborers	25	17	24	28	16	15
Service	13	16	9	28	15	6
Farm	25	20	7	15	4	5
Total percent	100	100	100	100	100	100
Total number (thousands)	231	231	231	322	322	322

a See note a, Table 3.16, p. 78.
b Between 0.1 and 0.5 percent.

is not surprising in view of the intercolor educational gap.[20] One of the largest differences in occupational assignment--i.e., in the proportion in the category of nonfarm managers, officials and proprietors--reflects the widely discussed unavailability of capital to enable young black men to become self-employed.

However, the convergence of white and black occupational distributions which typifies those 24 and older is not discernible among the younger men. In fact, the sum of the deviations between the white and black distributions is larger in 1969 than at the time of the first jobs. Whether this is viewed as a "deterioration" of the position of blacks vis-a-vis whites depends on the perspective one adopts. For example, a young white man was three times as likely as a young black to have been a craftsman both on his first job (13 versus 4 percent) and on his job in 1969 (27 versus 9 percent), but the absolute difference in favor of whites in the proportion employed as craftsmen doubles between the first and 1969 jobs (from 9 to 18 percentage points). A complementary observation is that the proportion of whites who were operatives decreased by about a fourth (from 37 to 29 percent) between first and 1969 jobs, whereas the percentage of blacks employed as operatives increased by one-half (from 26 to 40 percent).[21] This strongly suggests that the entry jobs of young blacks are not in occupations which are characterized by reasonable assurance of upward mobility.

There are also distinct patterns of occupational change according to level of educational attainment. Irrespective of age or color, high school graduates advanced more between their first and 1969 jobs than did young men with less than 12 years of schooling (Tables 3A-1 and 3A-2). For these young men who never attended college, occupational advancement takes the form mainly of movement up the blue-collar hierarchy, and, to a small extent among whites, movement into self-employment. For whites 24 and older who attended college,[22] the principal occupational shifting that is evident between first and current jobs is toward managerial and sales positions and away from

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20 See note 19, p. 79.

21 A similar intercolor difference is also discernible among those 24 and older.

22 This is the only age-color group in which there are sufficient sample cases of young men with 13 or more years of schooling to permit an analysis.

clerical jobs. As would be expected because of the investment in schooling necessary to enter the professions, there is very little change between the first and 1969 jobs in the proportion employed in professional/technical positions.

Controlling for educational attainment also reveals additional intercolor differences in the patterns of occupational movement. The data indicate a convergence of the black and white occupational distributions as between first and 1969 job only among those 24 and older with less than 12 years of schooling. For high school graduates, the intercolor difference evident in entry occupations appears to persist through 1969. The data do not permit an intercolor comparison of men with college training because of the small number of blacks with this level of schooling.

Gross Occupational Movement

Clearly, the net change in occupational distribution between first and current job substantially understates the number of young men who moved from one occupational category to another between the beginning of their work career and 1969.[23] Overall, only 29 and 26 percent of the whites and blacks, respectively, are in the same major occupational group in 1969 as the one in which they served their first job after leaving school. Of course, this proportion varies widely depending upon the occupation of the first job. Among whites, about three-fourths of those who began in professional, technical, or managerial positions and nearly two-fifths who started as craftsmen or operatives stayed in the same category (Table 3.18). At the other extreme, only one in eight young white men whose entry job was as a nonfarm laborer or service worker remained in the same occupation group. Among blacks, about half of those who began as operatives stayed in that category, whereas only one in seven who entered the labor force as a service worker was still a service worker in 1969.

Although there are cases of virtually every possible interoccupation group shift, the data in Table 3.18 tend to reinforce the conclusion of "upward" movement drawn from the data on net shifts. For example, among whites who began their careers in blue-collar jobs more than one in five moved into a white-collar job and fewer than one in twenty moved

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23 Although the coding of occupational change by comparing reported occupations at two points in time doubtless leads to some overstatement of the gross amount of movement, there is no reason to believe that the coding is nonrandom with respect to the occupational categories. Thus, we do not believe that the overstatement biases observed relationships between occupational movement and, say, color.

Table 3.18 Major Occupation Group of Current (1969) Job, by Major Occupation of First Job and Color: Employed Out-of-School Youth[a]

(Percentage distribution of occupational destinations)

Occupation of first job \ Current (1969) occupation	Professional, managerial	Clerical	Sales	Craftsmen	Operatives	Nonfarm laborers	Service	Farm	Total percent	Total number (thousands)
	WHITES									
Professional, managerial	74	3	4	6	7	5	0	0	100	211
Clerical	28	27	10	16	15	d	4	0	100	305
Sales	40	1	16	16	16	6	2	3	100	154
Craftsmen	15	2	6	39	26	8	2	2	100	434
Operatives	11	5	6	30	38	5	2	2	100	1,086
Nonfarm laborers	14	4	4	22	35	12	6	1	100	651
Service	20	11	3	10	31	13	12	0	100	158
Farm	8	3	1	23	24	12	2	28	100	355
Average percent[b]	19	6	6	25	29	8	4	4	100	3,482
	BLACKS									
Professional, managerial	c									5
Clerical, sales	13	28	0	24	21	10	5	0	100	30
Craftsmen				c						26
Operatives	9	5	0	15	49	13	9	1	100	107
Nonfarm laborers	0	10	1	17	44	19	5	4	100	142
Service	2	6	0	8	52	17	14	1	100	116
Farm	0	3	0	11	30	33	0	23	100	102
Average percent[b]	5	8	d	14	41	19	8	6	100	553

a See note a, Table 3.16, p.78.

b Includes those whose first job after leaving school was in the armed services and those for whom occupation of first job was not ascertained.

c Percentage distribtuion not shown where base represents fewer than 25 sample cases.

d Between 0.1 and 0.5 percent.

into a service or farm job. In addition, more than half of the movers from blue-to white-collar jobs currently hold high-level positions (i.e., professional, technical or managerial jobs).

Comparison of the gross occupational shifts of young white and black men seems to support a conclusion of a widening socioeconomic gap between the color groups. While both color groups exhibit noticeably upward movement, the types of occupational changes made by blacks are ostensibly less desirable than those made by whites. For example, among those who began as operatives, three-fifths of the blacks either remained operatives or became nonfarm laborers, in contrast to two-fifths of the whites. Furthermore, three in ten of the whites who started as operatives moved into craft occupations, whereas the corresponding fraction of blacks is only three in twenty. Of particular interest is the intercolor difference in the pattern of movement out of the agricultural sector. Although young black men are somewhat more likely than their white counterparts to have departed from farm occupations, the attainment of black movers is considerably below that of white. Twelve percent of the whites achieved white-collar status, in contrast to only 3 percent of the blacks, and one-third of the blacks versus only one-eighth of the whites are employed as nonfarm laborers. Similar intercolor differences prevail in each occupation-of-origin category with sufficient sample cases for confident comparison, even when educational attainment is controlled (Table 3A-3).

In order to highlight the extent of the relationship between first and current occupation, Table 3.19 contains a "standardized" version of the data in Table 3.18. As a method of exhibiting the extent to which this relationship is nonrandom, the percentages in each column of Table 3.18 were divided by the corresponding percentage in the "average" row.[24] If occupational movement were a purely random process, each cell in Table 3.19 would contain a "1," i.e., each row in Table 3.18 would be identical to the "average" row. Consequently, a cell entry greater (less) than one indicates that movement between the two occupational categories is greater (less) than what would be expected on the basis of random movement.

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24 The actual computations were performed using data expressed to tenths of a percent. Use of this technique is suggested in earlier studies of occupational change. See, for example, Herbert S. Parnes et al., The Pre-Retirement Years: A longitudinal study of the labor market experience of men, vol. 1, U.S. Department of Labor, Manpower Research Monograph no. 15 (Washington: U.S. Government Printing Office, 1970), pp. 122-24; and Peter M. Blau and Otis D. Duncan, The American Occupational Structure (New York: John Wiley and Sons, Inc., 1967), pp. 29-38.

Table 3.19 Relation between First and Current (1969) Occupations, by Color: Employed Out-of-School Youth[a]

(Ratios of observed frequencies to frequencies expected on assumption of random occupational movement)[b]

Occupation of first job \ Current (1969) occupation	Professional, managerial	Clerical	Sales	Craftsmen	Operatives	Nonfarm laborers	Service	Farm
	WHITES							
Professional, managerial	3.9	0.5	0.8	0.2	0.2	0.7	0.0	0.0
Clerical	1.5	4.2	1.7	0.7	0.5	0.1	1.1	0.0
Sales	2.1	0.1	2.8	0.6	0.6	0.7	0.7	0.7
Craftsmen	0.8	0.3	1.1	1.6	0.9	1.0	0.7	0.5
Operatives	0.6	0.8	1.0	1.2	1.3	0.7	0.7	0.4
Nonfarm laborers	0.7	0.7	0.8	0.9	1.2	1.6	1.8	0.3
Service	1.1	1.7	0.5	0.4	1.1	1.7	3.5	0.0
Farm	0.3	0.5	0.2	0.9	0.8	1.5	0.5	6.6
	BLACKS							
Professional, managerial	c	c	c	c	c	c	c	c
Clerical, sales	2.8	3.5	0.0	1.7	0.5	0.5	0.6	0.0
Craftsmen	c	c	c	c	c	c	c	c
Operatives	1.9	1.0	0.0	1.0	1.2	0.7	1.1	0.2
Nonfarm laborers	0.0	0.6	3.7	1.2	1.1	1.0	0.7	0.7
Service	0.5	1.3	0.0	0.5	1.3	0.9	1.9	0.2
Farm	0.0	0.3	0.0	0.8	0.7	1.7	0.0	3.9

a See note a, Table 3.16, p. 78.

b For explanation, see text p. 84.

c Ratio not shown where base (i.e., number of incumbents in the first-occupation category) represents fewer than 25 sample cases.

As an example of the different interpretations yielded by the two versions of the data, consider the group of young white men whose first job after leaving school was as a salesman. Table 3.18 indicates that this group was equally likely (16 percent) to be in a sales or craft occupation in 1969. However, this ignores the fact that men in this age group in craft occupations outnumber those in sales by a ratio of 4:1 (25 versus 6 percent). Thus, if occupational movement were random between initial and current job, one would have expected 25 percent of the salesmen to have entered craft occupations and only 6 percent to have remained in sales. The data in Table 3.19, however, indicate that young white men who began as salesmen are about three times as likely as all young white men to be in sales jobs in 1969. On the other hand, they are only three-fifths as likely as the total group to be in craft occupations.

Viewed in this latter way, the influence of starting occupation is seen to be much more pronounced. In the case of whites each cell in the main diagonal of Table 3.19 contains a number larger than one, and with a single exception, each number in the main diagonal is substantially larger than the entry in any other cell on the same line. Among blacks there are a few more exceptions. The barrier between blue-collar and white-collar occupations is also more evident in Table 3.19. For white men, six of the nine cells relating white-collar occupations of origin to white-collar occupations of destination have entries greater than one. In contrast, only two of the nine cells relating starting blue-collar occupations to current white-collar occupations contain values equal to or greater than one.

The data also indicate that the relationship between initial and current occupation is stronger among young white men than among their black counterparts. That is, the main diagonal entries are uniformly higher for whites than for blacks. Yet, it seems clear that this greater "openness" of the occupational structure for blacks vis-a-vis whites has not worked to the advantage of the former group. Among youth whose entry-level jobs were in low-status occupations, the direction of movement out of these jobs appears to be more random (or haphazard) for blacks than for whites.

Desired Occupational Movement

In addition to charting the paths of occupational mobility which already have been followed by the young men under study, it is of interest to examine the paths which they hope to pursue in the future. Overall, more than two-fifths of the whites and more than three-fifths of the blacks aspire to a job at age 30 which is in a major occupation different

from the one in which they are currently employed (1969) (Table 3.20).[25] Furthermore, the distribution of their aspirations deviates more from the distribution of their current occupations than the latter deviates from the distribution of their starting occupations. For whites, the sum of the deviations between the percentage distributions of first and current jobs is 51 points (Table 3.16) in contrast to 55 points for the comparison of current job to job desired at age 30 (Table 3.21). For blacks the corresponding figures are 72 and 84 points respectively.

All things considered, it appears extremely unlikely that this much additional occupation shifting will occur by the time the young men reach age 30. Furthermore, the types of shifts which would be necessary for the realization of the aspired-to distributions seem rather improbable in light of the fact that all of these young men discontinued formal schooling at least four years ago. For example, in the absence of a relatively large-scale return to school it is doubtful that the proportion of young men in professional and technical jobs can increase as substantially as the distribution of aspirations would imply (i.e., 50 percent for the whites and 175 percent for the blacks). Thus, even after four years of participating in the labor market on a full-time basis, young men exhibit a substantial residue of unreality in their occupational goals.

From two different perspectives the professed aspirations of young blacks are more fanciful than those of whites. First, although blacks have exhibited more occupational movement between entry and current job than whites, the intercolor difference in the amount of movement would have to grow if the aspirations of both groups were to be realized. Second, the nature of the movement implied by the expressed goals of the young black men would drastically reduce the intercolor difference in occupational distribution, whereas the work history of this cohort suggests that the difference will, at best, decline only slightly. That is, realization of the aspirations of both color groups would yield a total difference of 33 percentage points between their occupation distributions, in comparison to differences of 66 and 61 points for their entry and current jobs, respectively (Tables 3.16 and 3.21).

Controlling simultaneously for age and education does not alter the conclusion that young black men report less realistic occupational aspirations than do their white counterparts. For example, among men 24 and older with high school diplomas, blacks aspire to professional/technical jobs at nearly twice (18 versus 10 percent) the rate of whites, whereas blacks are only two-thirds (4 versus 6 percent) as likely

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25 The occupational aspirations referred to here were measured in 1969. See Appendix G, Item 55.

Table 3.20 Proportion Aspiring to Major Occupation Group Which is Different from Current (1969) Major Occupation Group, by Age, Highest Year of School Completed and Color: Employed Out-of-School Youth[a]

Current age and highest year of school completed	Total number (thousands)	Percent whose occupational aspiration is different from current occupation
	WHITES	
17-23		
Less than 12	532	55
12	597	51
Total or average[b]	1,216	51
24-27		
Less than 12	684	38
12	1,133	40
13 or more	448	37
Total or average	2,264	39
Total, 17-27		
Less than 12	1,221	45
12	1,730	44
13 or more	531	35
Total or average	3,482	43
	BLACKS	
17-23		
Less than 12	137	65
12	84	83
Total or average[b]	231	73
24-27		
Less than 12	151	73
12	144	56
13 or more	26	c
Total or average	322	56
Total, 17-27		
Less than 12	288	61
12	228	66
13 or more	36	54
Total or average	553	63

a See note a, Table 3.16, p. 78

b Includes those with 13 or more years of training.

c Percent not shown where base represents fewer than 25 sample cases.

Table 3.21 Major Occupation Group of Current (1969) Job and Job Desired at Age 30, by Color: Employed Out-of-School Youth[a]

(Percentage distribution)

Major occupation group	WHITES		BLACKS	
	Current job	Aspiration	Current job	Aspiration
Professional, technical	8	13	4	11
Nonfarm managers	11	24	1	12
Clerical	6	3	8	4
Sales	6	3	b	2
Craftsmen	25	26	14	26
Operatives	29	12	41	20
Nonfarm laborers	8	3	19	4
Service	4	4	8	8
Farm	4	5	6	4
Don't know	-	7	-	10
Total percent	100	100	100	100
Total number (thousands)	3,482	3,482	553	553

a See note a, Table 3.16, p. 78.
b Between 0.1 and 0.5 percent.

to occupy this type of job in 1969 (Table 3A-4). In every age-education group the goals of blacks imply much more occupational shifting than do those of whites, and attainment of each color group's goals would result in a major reduction in the intercolor disparity in occupational distribution. The data at hand provide no explanation for this pervasive intercolor difference in the realism of expressed occupational goals. Yet, it is consistent with a frequently heard charge which has been levelled at the civil rights movement of the 1960's--i.e., that young black Americans have been induced to raise their sights to levels at which they are bound to be frustrated.

The gap between the distributions of actual occupations and occupational goals appears to be reduced as labor market experience increases (Table 3A-4). In general, the goals of men 17 to 23 would require more occupation-changing than would the goals of men 24 to 27 (Table 3.20). This relationship between labor market exposure and projected occupational change doubtless reflects both (a) the true probability of more occupational changing by the younger men and (b) a less realistic assessment by the younger men of the opportunities for change. Exemplary of the latter point is that, among whites with less than 12 years of education, the fraction of those under 24 who aspire to professional/technical jobs is 150 percent higher than the corresponding fraction of those 24 and older (Table 3A-4). The analogous differences among white high school graduates and black high school dropouts are 50 percent and 600 percent, respectively.

In general, educational attainment appears to bear a regular relationship with congruity of current and desired occupation. The types of occupational shifts implied by the aspirations do seem less unattainable for the graduates than for those without a high school diploma (Table 3A-4). Further, the most realistic goals seem to be held by young men who went to college. Finally, there is some evidence of a positive association between educational attainment and the probability of expressing a specific occupational goal.

VI CHANGE IN HOURLY RATE OF PAY 1966-1969

The average young white man who was out of school and employed as a wage or salary worker at both the 1966 and 1969 surveys increased his hourly earnings between those dates by 53 percent (Table 3.22). Because the rate of increase for the corresponding group of black men was 68 percent, there was some narrowing of the relative intercolor differential in wages. In addition, this narrowing is evident primarily for young men who never attended college. Nonetheless, in 1969 young whites still were earning about a third more per hour than blacks.

One of the major focuses of recent contributions to the literature on the economic returns to investment in education is the effect on earnings of mental ability, independent of schooling. It has been

Table 3.22 Comparison of Hourly Rate of Pay 1966 and 1969, by Highest Year of School Completed and Color: Out-of-School Youth Employed as Wage and Salary Workers 1966 and 1969[a]

Highest year of school completed	Total number (thousands)	Mean rate of pay (dollars/hour)		Mean percentage increase in rate of pay 1966 to 1969[b]
		1966	1969	
	WHITES			
Less than 12	1,004	2.20	3.18	59
12	1,413	2.59	3.60	50
13-15	265	2.66	3.88	55
16 or more	186	3.12	4.65	52
Total	2,867	2.49	3.54	53
	BLACKS			
Less than 12	252	1.52	2.23	73
12	200	1.96	2.88	65
13 or more	34	2.25	3.35	55
Total	486	1.78	2.62	68

a This is a further restriction of the universe described in note a, Table 3.16, p. 78.

b Computed as the mean of $\left[100 \left(\frac{\text{WAGE 1969}}{\text{WAGE 1966}}\right) - 100\right]$.

rather conclusively demonstrated, using cross-sectional data, that ability does have a significant impact, net of schooling, upon earnings.[26] The next logical question is whether ability and labor force experience are complementary in their effects on productivity, i.e., whether mental ability, net of schooling, affects the time path of earnings. To date, the absence of longitudinal data has precluded empirical investigation of this question, with one exception. Based on regression analyses of longitudinal data from three different samples of men, Hause concludes that the effect of mental ability on earnings seems to increase over the life-cycle.[27] In other words, ability has a positive effect (net of schooling) on the rate of growth of earnings.

The longitudinal data of the present study indicate that in the early portion of the life-cycle there is no systematic relationship between measured ability, net of schooling, and the rate of increase in hourly earnings.[28] That is, mental ability exhibits a positive relationship (independent of education) with hourly rate of pay in both 1966 and 1969, but not with the mean percentage increase in rate of pay between these dates (Table 3.23). Furthermore, the absolute and relative differentials in wages as between the ability groups neither widen nor narrow systematically. For example, among white high school graduates the relative wage differential between those with above-average ability and those with average ability rises from 1 percent in 1966 to 7 percent in 1969. In contrast, the corresponding differential for the comparison of average and below-average white graduates declines from 6 percent to 4 percent.

Because of the vast differences between the studies in (1) the age range of the samples, (2) the method of measuring ability and earnings, and (3) statistical technique, it would be inappropriate to compare

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26 See, for example, Zvi Griliches and William Mason, "Education, Income, and Ability," Journal of Political Economy 80 (May/June 1972-Part 2):S74-S103; John C. Hause, "Earnings Profile: Ability and Schooling," Journal of Political Economy 80 (May/June 1972-Part 2):S108-S138; and Andrew I. Kohen, "Determinants of Early Labor Market Success Among Young Men: Race, Ability, Quantity and Quality of Schooling."

27 Hause, "Earnings Profile: Ability and Schooling," pp. S116-S117, S120-S121.

28 For definition of the measure of ability used here see Chapter Two, n. 14, and Appendix E.

Table 3.23 Comparison of Hourly Rate of Pay 1966 and 1969, by Highest Year of School Completed, Measured Mental Ability and Color: Out-of-School Youth Employed as Wage and Salary Workers 1966 and 1969 Who Had Attended High School[a]

Highest year of school completed and mental ability[b]	WHITES				BLACKS			
	Total number (thousands)	Mean rate of pay (dollars/hour)		Mean percentage increase in rate of pay 1966 to 1969[d]	Total number (thousands)	Mean rate of pay (dollars/hour)		Mean percentage increase in rate of pay 1966 to 1969[d]
		1966	1969			1966	1969	
9-11								
Above-average ability	28	c	c	c	1	c	c	c
Average ability	248	2.36	3.40	58	22	2.37	2.93	41
Below-average ability	243	2.16	3.40	82	30	1.66	2.63	64
12								
Above-average ability	105	2.61	3.84	55	5	c	c	c
Average ability	1,035	2.58	3.58	51	61	1.97	2.86	58
Below-average ability	163	2.44	3.45	56	59	2.20	2.84	57
13 or more								
Above-average ability	128	2.91	4.59	69	14	c	c	c
Average ability	252	2.66	3.90	66	4	c	c	c
Below-average ability	13	c	c	c	3	c	c	c

a This is a further restriction of the universe described in note a, Table 3.16, p. 78. The measure of ability is not available for those who did not attend high school.

b Categorization of ability levels for whites is as follows: above-average = stanine 7-9; average = stanine 4-6; below-average = stanine 1-3. For blacks, the corresponding stanine groupings are 6-9, 3-5, and 1-2.

c Means now shown where base represents fewer than 25 sample cases.

d Computed as the mean of $\left[100\left(\frac{\text{WAGE 1969}}{\text{WAGE 1966}}\right) - 100\right]$.

these findings to those of Hause. Nevertheless, future researchers of the role of ability in lifetime-earnings determination, especially as it relates to equality of income distribution, would be well advised to bear in mind both sets of results.[29]

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29 For some pioneering work in this area see Gary S. Becker, Human Capital and the Personal Distribution of Income: An Analytical Approach W. S. Woytinsky Lecture no. 1 (Ann Arbor: Institute of Public Administration, The University of Michigan, 1967); Jacob Mincer, "The Distribution of Labor Incomes: A Survey with Special Reference to the Human Capital Approach," Journal of Economic Literature 8 (March 1970): 1-26; and Barry R. Chiswick and Jacob Mincer, "Time Series Changes in Personal Income Inequality in the United States from 1939, with Projections to 1985," Journal of Political Economy 80 (May/June 1972-Part 2):S34-S66.

APPENDIX TABLES

CHAPTER THREE

Table 3A-1 Major Occupation Group of First, 1966 and 1969 Job, by Highest Year of School Completed[a] and Color: Employed Out-of-School Youth 17 to 23 Years of Age in 1969[b]

(Percentage distribution)

Major occupation group	Less than 12			Exactly 12		
	First job	1966 job	1969 job	First job	1966 job	1969 job
	WHITES					
Professional, technical	1	2	3	1	3	4
Nonfarm managers and proprietors	0	2	3	2	1	9
Clerical	3	4	6	10	10	10
Sales	2	1	6	5	3	6
Craftsmen, foremen	11	22	27	14	20	27
Operatives	40	39	31	36	45	31
Nonfarm laborers	22	19	19	18	8	7
Service	6	7	2	3	4	3
Farm	15	4	2	11	6	4
Total percent	100	100	100	100	100	100
Total number (thousands)	537	537	537	597	597	597
	BLACKS					
Professional, technical	c	0	0	0	0	4
Nonfarm managers and proprietors	0	0	1	0	0	0
Clerical	2	2	5	13	8	14
Sales	1	0	0	0	0	0
Craftsmen, foremen	4	4	6	5	4	14
Operatives	22	26	40	33	54	37
Nonfarm laborers	18	20	27	33	13	21
Service	13	16	9	13	17	9
Farm	40	31	12	4	4	0
Total percent	100	100	100	100	100	100
Total number (thousands)	137	137	137	84	84	84

a For both color groups, those who attended college are represented by fewer than 25 sample cases and are, therefore, not shown here.

b This is a further restriction of the universe described in note a, Table 3.16, p. 78.

c Between 0.1 and 0.5 percent.

Table 3A-2 Major Occupation Group of First, 1966 and 1969 Jobs, by Highest Year of School Completed[a] and Color: Employed Out-of-School Youth 24 to 27 Years of Age in 1969[b]

(Percentage distribution)

Major occupation group	WHITES									BLACKS					
	Less than 12			Exactly 12			13 or more			Less than 12			Exactly 12		
	First job	1966 job	1969 job	First job	1966 job	1969 job	First job	1966 job	1969 job	First job	1966 job	1969 job	First job	1966 job	1969 job
Professional, technical	c	c	c	3	7	6	28	35	32	0	c	0	1	c	4
Nonfarm managers and proprietors	0	4	8	2	8	14	2	5	18	0	2	1	0	0	0
Clerical	4	2	3	13	10	8	15	9	2	3	4	3	4	9	9
Sales	3	3	2	4	3	4	8	15	15	1	0	0	0	0	1
Craftsmen, foremen	11	26	24	14	27	28	13	17	13	2	19	22	8	16	16
Operatives	36	39	45	32	31	26	15	14	11	17	33	39	18	42	49
Nonfarm laborers	24	12	8	19	5	4	12	2	6	28	19	18	30	14	14
Service	7	6	4	4	4	5	3	0	c	23	13	6	33	19	7
Farm	14	8	6	8	5	5	4	3	3	26	8	10	6	0	0
Total percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Total number (thousands)	684	684	684	1,133	1,133	1,133	448	448	448	151	151	151	144	144	144

a Blacks who attended college are represented by fewer than 25 sample cases and are therefore not shown here.

b This is a further restriction of the universe described in note a, Table 3.16, p. 78.

c Between 0.1 and 0.5 percent.

Table 3A-3 Major Occupation Group in 1969 of Employed Out-of-School Youth Whose First Job After Leaving School Was as an Operative or Nonfarm Laborer,[a] by Color and Highest Year of School Completed

(Percentage distribution)

1969 occupation	WHITES				BLACKS			
	Operative		Laborer		Operative		Laborer	
	Less than 12	12	Less than 12	12	Less than 12	12	Less than 12	12
Professional, technical, managerial	4	14	10	15	2	16	0	0
Clerical	3	8	11	0	5	5	5	14
Sales	8	5	0	7	0	0	0	2
Craftsmen	28	33	19	24	10	20	24	11
Operatives	44	35	38	35	50	46	44	41
Nonfarm laborers	8	2	17	9	16	11	14	26
Service	4	2	3	10	15	3	4	7
Farm	1	2	2	0	2	0	9	0
Total percent	100	100	100	100	100	100	100	100
Total number (thousands)	439	566	270	323	53	53	63	71

a This is a further restriction of the universe described in note a, Table 3.16, p. 78.

Table 3A-4 Major Occupation Group of Current (1969) Job and Job Desired at Age 30 by Age and Highest Year of School Completed: Employed Out-of-School White Youth[a]

(Percentage distribution)

Major occupation group	17-23 years of age				24-27 years of age					
	Less than 12		12		Less than 12		12		13 or more	
	Current job	Aspiration	Current job	Aspiration	Current job	Aspiration	Current job	Aspiration	Current job	Aspiration
Professional, technical	3	10	4	15	b	4	6	10	32	33
Nonfarm managers, proprietors	3	14	9	24	8	18	14	26	18	37
Clerical	6	4	10	2	3	2	8	6	2	0
Sales	6	2	6	4	2	1	4	3	15	7
Craftsmen	27	34	27	33	24	29	28	23	13	11
Operatives	31	15	31	6	45	24	26	12	11	2
Nonfarm laborers	19	5	7	2	8	4	4	2	6	2
Service	2	3	3	4	4	3	5	6	b	1
Farm	2	3	4	5	6	7	5	5	3	3
Don't know	-	10	-	6	-	7	-	6	-	4
Total percent	100	100	100	100	100	100	100	100	100	100
Total number (thousands)	537	537	597	597	684	684	1,133	1,133	448	448

Table continued on next page.

Table 3A-4 Major Occupation Group of Current (1969) Job and Job Desired at Age 30 by Age and Highest Year of School Completed: Employed Out-of-School Black Youth[a]

(Percentage distribution)

Major occupation group	17-23 years of age				24-27 years of age					
	Less than 12		12		Less than 12		12		13 or more	
	Current job	Aspiration	Current job	Aspiration	Current job	Aspiration	Current job	Aspiration	Current job	Aspiration
Professional, technical	0	7	4	15	0	1	4	18		
Nonfarm managers, proprietors	1	8	0	21	1	5	0	13		
Clerical	5	2	14	10	3	2	9	3		
Sales	0	1	0	1	0	1	1	5		
Craftsmen	6	21	14	21	22	43	16	23		
Operatives	40	22	37	7	39	25	49	21	c	c
Nonfarm laborers	27	5	21	2	18	2	14	9		
Service	9	12	9	7	6	5	7	6		
Farm	12	8	0	0	10	5	0	0		
Don't know	-	13	-	15	-	11	-	3		
Total percent	100	100	100	100	100	100	100	100		
Total number (thousands)	137	137	84	84	151	151	144	144	26	26

a This is a further restriction of the universe described in note a, Table 3.16, p. 78.

b Between 0.1 and 0.5 percent.

c Percentage distribution not shown when base represents fewer than 25 sample cases.

CHAPTER FOUR*

CHANGES IN THE EDUCATIONAL AND OCCUPATIONAL GOALS OF STUDENTS

I INTRODUCTION

The process of progressing through the formal educational system usually involves a multitude of changes in a young person's values, ideals, aspirations, skills and behavior. Often these changes are described by the all-embracing term of "maturation." But clearly, maturation occurs at differing rates of speed and in a variety of patterns. It is the purpose of this chapter to describe patterns of change (maturation) in two dimensions of the lives of young men who were enrolled in school continuously from the initial through fourth surveys.[1] These two dimensions are educational goals (Section II) and occupational aspirations (Section III). In Section IV we explore the interrelations between educational and occupational goal revision.

Although considerable research has been conducted on the determinants and consequences of educational and occupational goals of youth,[2] there is much less empirical work on the process of formation and revision

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* This chapter was written by Andrew I. Kohen.

1 A respondent is defined as continuously enrolled if he was attending school at the date of each survey. Since interviews are conducted in October-November of each year, there is some imprecision in the definition, e.g., youth who graduated from high school in February may have waited until the succeeding autumn to enroll in college. However, we do not consider this to be a serious drawback for the description contained here.

2 See, for example, C. N. Alexander, Jr. and E. Q. Campbell, "Peer Influences on Adolescent Educational Aspirations and Attainments," American Sociological Review 29 (August 1964):568-75; O. D. Duncan, A. O. Haller, and A. Portes, "Peer Influences on Aspirations: A Reinterpretation," American Journal of Sociology 74 (September 1968): 119-37; R. E. Herriott, "Some Social Determinants of Educational Aspiration," Harvard Educational Review 33 (Spring 1963):157-77; W. H. Sewell, A. O. Haller and G. W. Ohlendorf, "The Educational and Early Occupational Status Attainment Process: Replication and Revision," American Sociological Review 35 (December 1970):1014-27.

of these aspirations.[3] In addition, the theoretical literature concerning the development and modification of these types of goals tends to be so abstract and general as to provide few hypotheses which are testable with the kinds of longitudinal data available to us.[4] The presentation below is not designed to fill either of those gaps. Rather, it is an attempt to present the initial results of exploration into the extent of longitudinal stability in educational and occupational aspirations of students and to describe the types of change patterns which do occur. Further research into this area, based on multivariate statistical analysis, is in process.[5]

II REVISION OF EDUCATIONAL GOALS 1966 TO 1969

More than one-half of the young men continuously enrolled in school since the initial survey revised their educational goals between

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3 Most of the longitudinal studies are based on the Project Talent data bank and tend to examine change by comparing beginning and ending aspirations without reference to intervening dynamics. See, for example, Helen S. Astin, "Patterns of Career Choices Over Time," Personnel and Guidance Journal 46 (February 1967):541-46 and John C. Flanagan et al., Five Years After High School (Palo Alto: American Institutes for Research and University of Pittsburgh, 1971): Chapters 3 and 4. Another group of studies with a similar approach and which focus principally on college students are those of John L. Holland, his co-researchers. For example, see John L. Holland, "Explorations of a Theory of Vocational Choice: VI, A Longitudinal Study Using a Sample of Typical College Students," Journal of Applied Psychology Monograph Supplement 52 (February 1968):1-37. Finally, see also Jerald G. Bachman, Youth in Transition, Vol. II (Ann Arbor: Institute for Social Research, University of Michigan, 1970), pp. 173-90, 205-08.

4 Examples of this theoretical literature are E. Ginzberg, S. W. Ginsberg, S. Axelrod, and J. L. Herma, Occupational Choice: An Approach to a General Theory (New York: Columbia University Press, 1951) and D. E. Super et al., Career Development: Self-Concept Theory, Research Monograph No. 4 (College Entrance Examination Board, 1963).

5 An early analysis of one-year changes in aspirations can be found in Wil J. Smith and Frederick A. Zeller, "The Correlates of Change in Educational Aspirations: A Study of Factors Related to Downward Adjustment Among Men 14-24 Years of Age, 1966-1967" (Paper presented at the 1971 annual meetings of the American Educational Research Association, New York, February 1971).

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1966 and 1969 (Table 4.1). By and large, the net result of the revisions appears to be that the group's aspirations rose between 1966 and 1969. This is not surprising since the young men already have exhibited considerable scholastic achievement--i.e., nearly three-fourths of the whites and more than one-half of the blacks were attending college in 1969.[6] Yet, nearly one-fifth of the students made two or more goal changes whose net result is not ascertainable from the measure used in Table 4.1.[7]

Among both blacks and whites, the stability rate (i.e., the percent expressing the same goal at all four interviews) appears to be greater among youth whose initial goal was at least college graduation than among those who originally aspired only to high school graduation. As we noted in an examination of one-year changes in goals, the least stable goals were held by young men who initially aspired to completion of two years of college.[8] As compared to those whose goal was either a high school diploma or a four-year college degree, this group of youth not only revised upward and downward more frequently, but was much more likely to make three revisions whose net result is uncertain. Thus, it would appear that students are far from completely persuaded of the value of having a two-year terminal degree, despite the tremendous growth in such programs during the past half-decade.

The only intercolor difference apparent in the data is a slightly greater tendency for young black men than for white to have revised their goal downward. This difference is attributable solely to the group who initially expressed the desire to complete at least four years of college. Interestingly, in this group there is no intercolor difference in the stability rate nor in the proportion for whom the net

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6 In addition, those youth who revised their goals downward are much more likely to have been omitted from the universe being studied because of their having left school.

7 The measure is derived solely from aggregating the three pair-wise comparisons of goals between adjacent years. Thus, for example, a student is coded as an "upward changer" only if his pattern of goal revision was one of the following: (1) one upward change and two "no changes," (2) two upward changes and one "no change" or (3) three upward changes. Seven possible patterns of change are thus collapsed into one category. See Table 4.2 for an alternative method of measuring change between 1966 and 1969.

8 Kohen and Parnes, Career Thresholds, 3:9-10.

Table 4.1 Pattern of Revision of Educational Goals by Students[a] 1966 through 1969, by Educational Goal in 1966 and Color

(Percentage distribution)

Goal revision pattern 1966 through 1969[b]	1966 Goal			
	High school 4	College		Total[c]
		2	4 or more	
	WHITES			
Same goal, all 4 years	42	12	48	45
Upward	43	50	23	26
Downward	0	18	12	11
Net uncertain	15	20	17	18
2 changes	13	8	15	14
3 changes	2	12	2	3
Total percent	100	100	100	100
Total number (thousands)[e]	275	178	2,780	3,342
	BLACKS			
Same goal, all 4 years	36		48	42
Upward	50		17	26
Downward	0	d	19	14
Net uncertain	14		16	18
2 changes	10		12	12
3 changes	4		4	6
Total percent	100		100	100
Total number (thousands)[e]	54	21	189	281

a Unless further restricted the universe for all tables in this chapter is youth 17 to 27 years of age in 1969 who were attending school at each of the four survey dates.

b Only those for whom all revisions were upward are in the category "upward," and only those for whom all revisions were downward, are in the category "downward." The category "net uncertain" contains those who made at least two revisions in opposite directions.

c Includes a few respondents whose 1966 goal was less than high school graduation.

d Percentages not shown where base represents fewer than 25 sample cases.

e Includes those respondents who did not respond to the question in one or more years.

result of revision is uncertain. Rather, the entire differential is accounted for by a greater percentage of whites than of blacks revising upward and a smaller percentage of whites than of blacks revising downward.

A slightly different perspective on educational goal revision over a three-year period is gained from examining merely the net change in the goal, irrespective of the pattern of intervening revisions. The overall distribution of changes is much the same as that depicted by the pattern-of-revision measure.[9] That is, the stability rate is about 50 percent and the net direction of change appears to be upward (Table 4.2). However, there is substantial variation in goal revision according to year of school attending. The stability rate declines noticeably with amount of education until a youth enters his senior year of college and/or enrolls in graduate school. Since all of this group were college students at the initial survey date and persisted to at least the senior year, it is not surprising to find a higher stability rate among them. The apparently marked difference between blacks and whites in this latter group must be interpreted with considerable caution for several reasons. First, the number of sample cases among the blacks was quite small. Second, within the group of college seniors and graduate students the goals of the latter probably are more stable, especially at a point in the academic year at which many seniors are not certain about their admission to a graduate or professional program. Third, in the group shown as "college 4 or above" proportionately more whites than blacks are graduate students. This third reason may also explain why such a large fraction of blacks in this group experienced a decline in aspirations--i.e., most of them were seniors who faced the major cutbacks in financial aid available for graduate study which began to appear in 1969.

Excepting the seniors and graduate students, the proportion of young men whose net goal revision was upward seems to rise with educational attainment. This probably reflects both the confidence inspired by academic achievement and the selectivity of achievement. By the latter we mean that many of those who revised their goals downward had already departed the educational stream. Both forces seem to operate more strongly for young black men than for their white counterparts in that the proportion of upward changers is higher among blacks than among whites in each of the three level-of-attainment groups.

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9 Although the universes are not strictly comparable, the data in Table 4.2 suggest that about half of the youth whose revision patterns contained at least two changes in opposite directions actually made no net change at all, about one-fourth of them made upward changes and the remaining fourth revised downward.

Table 4.2 Net Change in Educational Goal 1966 to 1969, by Year of School Attending in 1969 and Color: Students Who Expressed a Definite Occupational Aspiration in 1966[a]

(Percentage distribution)

Net change in educational goal 1966-1969	Year of school attending in 1969				
	High school	College			Total
		1	2-3	4 or above	
	WHITES				
Upward	20	31	42	24	30
No change	54	51	43	69	54
Downward	26	18	15	7	16
Total percent	100	100	100	100	100
Total number (thousands)	624	566	761	641	2,592
	BLACKS				
Upward	24	46	52	7	32
No change	56	51	37	48	50
Downward	20	3	11	45	18
Total percent	100	100	100	100	100
Total number (thousands)	107	48	52	35	241

a This is a further restriction of the universe described in note a, Table 4.1, p. 106.

Finally, among whites, though not among blacks, the percentage of downward changers declines monotonically with level of schooling completed.

Although the form of existing tabulations precludes examining them jointly, it is interesting to compare the net changes in educational goals with the net changes in educational expectations. As a precautionary note, it must be mentioned that none of the comments which follow should be used to draw inferences about the convergence or divergence of goals and expectations. By and large, expectations appear to have been less stable than goals, particularly for black youth among whom the stability rate of goals is 50 percent while the comparable rate for expectations is only 39 percent (Tables 4.2 and 4A-1). In addition, the proportion of youth revising expectations upward is noticeably larger than the fraction revising goals in this direction. In general, the differential changes in goals and expectations derive mainly from the instability of expectations among the youngest students (i.e., those who were high school freshmen or below in 1966). For this group the rate of upward revision of expectations is more than twice that of upward revision of goals (43 versus 20 percent for whites and 49 versus 24 percent for blacks). Unlike the case with goals, stability of expectations exhibits no consistent relation with year in school. Finally, the only consistent intercolor difference in expectations change is that black youth were more likely than their white counterparts to have made an upward revision.[10]

III REVISION OF OCCUPATIONAL ASPIRATIONS 1966-1969

The occupation which a young man desires to hold when he is 30 years of age exhibits even more instability over time than his educational goal. Less than one-fifth of the youth continuously enrolled from 1966 through 1969 expressed the same aspiration at each of the four interviews, as compared to more than two-fifths who maintained the same educational goal consistently (Table 4.3).[11] Though there are three

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10 This might have been expected from the fact that in 1966 blacks were more likely than whites to have "expected" less schooling than they "aspired" to get. Parnes et al., Career Thresholds, 1:169-70.

11 In early results of the five-year follow-up study in Project Talent, Richards reports overall stability rates for 11th and 12th graders of 13.4 percent and 18.6, respectively. John C. Flanagan et al., Five Years After High School, pp. 3-12. The stability rate computations are based on occupations defined with nearly as much detail as the three-digit Census codes, but in a classification scheme unique to the Project Talent data. Although these proportions are similar to those found here, it must be noted that the Project Talent

major reasons underlying this large difference, only one is of substantive interest.[12] The reason is that there is a much greater range of occupational attainments than of educational attainments. Expressed slightly differently, the same amount of formal schooling can prepare a young man for a large number of occupations.[13]

The rather astounding extent of instability of occupational aspirations is amplified when it is noted that 45 percent of the young men in question revised their aspirations at least twice over the course of four annual interviews. An additional 19 percent of the white students and 13 percent of their black counterparts were unwilling, or unable, to articulate a desired occupation in one or more of the surveys. These latter figures provide the only instance of an apparent difference between blacks and whites in the pattern of revision of occupational goals. The method of coding the pattern-of-revision measure shown in Table 4.3 precludes any conclusion about the net direction of changes because nearly two-fifths of each color group is coded as "net uncertain."[14]

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study which is cited contains no controls for enrollment status at the follow-up survey nor for race. Also, it is limited to a much smaller age cohort, though the sample is considerably larger.

12 The other two, however, are definitely of methodological interest. The first is that occupations are more difficult than years of schooling to code, i.e., the educational goals are precoded on the interview schedule while considerable judgment is necessary in coding occupations. Thus, even though experienced Census Bureau coders are used, the same verbal description in two consecutive years may receive different three-digit numerical codes. Second, occupational aspirations have a much greater range of verbal (and conceptual) specificity than educational goals. Thus, even though a respondent holds the same aspiration in each of two years, the detail in his verbal description of it may vary enough for it to be assigned two different three-digit codes, e.g., engineer (092-093) and aeronautical engineer (080).

13 The interrelation between changes in occupational and educational goals is examined in Section IV of this chapter.

14 The measure is based solely on aggregating the three pair-wise comparisons of aspiration in adjacent years. The aggregation begins with the three-digit numerical codes from the Census classification scheme. To ascertain direction of change for those whose four three-digit codes are unequal, the two-digit Duncan index scores of occupational status are used. The direction of change is determined by the sign of the arithmetic difference between the scores of adjacent-year aspirations (later year minus earlier year). Uncertainty about the direction of change results from the occurrence of at least two changes

Table 4.3 Pattern of Revision of Occupational Aspirations 1966 Through 1969[a], by Color: Students Who Were Interviewed All Four Years[b]

Pattern of occupational aspiration revision 1966 through 1969[a]	WHITES	BLACKS
Same aspiration all four years	15	18
One revision	21	25
Upward	11	13
Downward	10	11
Two or three revisions	45	45
Upward	3	3
Downward	4	3
Direction uncertain	38	39
Undecided in one or more years	19	13
Total percent	100	100
Total number (thousands)	3,307	273

a Pattern of revision is derived from aggregation of the three adjacent-year comparisons of expressed occupational aspiration. Direction of change is determined by the sign of the difference in the Duncan index scores of the occupations being compared. Uncertainty of direction of change results from the occurrence of at least two changes with different signs. The group shown as "same aspiration" includes only those for whom the three-digit occupational code of aspiration is the same in each year.

b This is a further restriction of the universe described in note a, Table 4.1, p. 106.

In order to eliminate some of the ambiguity of the direction of goal changing, the pattern-of-revision variable is supplemented with a measure of net change based on comparing the initial and final aspirations.[15] Examination of this new measure of goal changing indicates that, overall, there is almost no net directional change in the aspiration level of the white students, while their black counterparts seems to have made a net upward revision (Table 4.4). That is, 29 percent of the white youth made positive changes and 31 percent made negative ones. The corresponding proportions among black students are 38 and 30 percent, respectively. However, because of the substantial variation in revision patterns according to level of school attending and the white-black difference in distribution by level of school attending, the intercolor difference must be investigated within educational attainment categories.

Before examining intercolor differences further, it is well to take note of the similarities and differences in stability of aspirations by schooling level. First, for both color groups the stability rate (i.e., percent with exactly the same goal 1966 and 1969) is higher among students still enrolled in high school in 1969 than among those who were college freshmen in 1969 (Table 4.4). But, the stability rate

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with different signs. Although it is possible for a change in three-digit codes to result in an arithmetic difference of zero in two-digit scores, no cases of this were observed among those who made exactly one revision.

15 Although the categories in Table 4.4 are arranged differently from those in Table 4.3 in order to highlight direction of net change, the variables are largely the same. The difference between them was developed as follows. For those youth who made 2-3 revisions including two in opposite directions (on the Duncan index), the three-digit Census codes of the 1966 and 1969 aspirations were compared. Those for whom the codes were equivalent are shown as "no net change, 2-3 revisions" (line 3, Table 4.4). For the remaining respondents (i.e., those with unequal three-digit codes 1966 and 1969), the arithmetic difference (1969 minus 1966) between Duncan index scores of the respective aspirations was used to determine the direction of net change. Those for whom the difference is +5 points or more are shown as part of "net change upward, 2-3 revisions" (line 6, Table 4.4). Symmetrically, those for whom the difference is -5 points or more are part of "net change downward, 2-3 revisions" (line 9, Table 4.4). Finally, those for whom the difference is $\pm$ 4 points are shown as "net change lateral" (line 11, Table 4.4).

Table 4.4 Pattern of Revision of Occupational Aspirations 1966 through 1969,[a] by Year of School Attending in 1966 and Color: Students Interviewed All Four Years Who Expressed a Definite Occupational Goal in 1966[b]

(Percentage distribution)

Pattern of occupational aspiration revision 1966 through 1969[a]	High school	College			Total
		1	2-3	4 or above	
	WHITES				
No net change 1966-1969[c]	25	16	22	38	25
Same aspiration all 4 years	17	7	17	29	18
Two or three revisions	8	9	5	9	7
Net change upward	28	33	31	24	29
One revision	15	14	15	8	13
Two or three revisions	13	19	16	16	16
Net change downward	30	35	30	26	31
One revision	14	14	11	8	12
Two or three revisions	16	21	19	18	19
Net change lateral[d]	8	6	9	9	7
Undecided in 1 or more years	9	10	8	3	8
Total percent	100	100	100	100	100
Total number (thousands)	445	470	618	503	2,037
	BLACKS				
No net change 1966-69[c]	19	9	25		24
Same aspiration all 4 years	16	4	23		20
Two or three revisions	3	5	2		4
Net change upward	33	63	39		38
One revision	18	24	7		15
Two or three revisions	15	39	32	e	23
Net change downward	33	11	33		30
One revision	18	6	9		13
Two or three revisions	15	5	24		17
Net change lateral[d]	7	5	0		5
Undecided in 1 or more years	8	0	0		4
Total percent	100	100	100		100
Total number (thousands)	92	39	49	26	207

a See text note 14, page 110 for the method of constructing this variable.

b This is a further restriction of the universe described in note a, Table 4.1, p. 106.

c There are no cases of a single revision in goal accompanied by an arithmetic difference of zero between the Duncan index scores associated with the two goals.

d Arithmetic difference between 1969 and 1966 Duncan index score of aspiration is ± 4 points.

e Percentage distribution not shown where the base represents fewer than 25 sample cases.

then increases dramatically with level of schooling.[16] A plausible explanation of this relationship may be that the first few months of the transition from high school to college are very unsettling and that commitment to a career goal rises as visible progress is made towards it.

Because of the small number of sample cases of black youth in the college-attendance groups, the following discussion of intercolor differences is abbreviated and tentative. Whites appear to have been more indecisive than blacks in specifying a career aspiration; whereas 4 percent of the black students were undecided in one or more years, 8 percent of their white counterparts were. On the basis of the proportions who revised their goals upward and downward there is no evidence of much net directional revision for any of the groups of white college students. In contrast, blacks attending the first three years of college exhibit marked net upward revision.

A third perspective on longitudinal change in aspirations can be gained from looking at the stability of goals, controlling for the initial (1966) occupational aspiration. The only groups for which coding procedures and sample size permit examination are shown in Table 4.5. Among both blacks and whites the stability rate for those who initially aspired to professional technical occupations is higher than for those who wanted blue-collar jobs. However, this difference is apparently attributable to the greater proportion of 1969 college students who initially aspired to professional jobs. That is, among whites in high school in 1969 the stability rates are virtually identical for those who originally desired a professional career and for those who were blue-collar aspirants. Interestingly, introduction of the base-year aspiration as a control eliminates some of the intercolor difference in goal-changing which is noted above--i.e., proportionately more blacks aspired to occupations with low rates of longitudinal stability.

Because coding and response variation doubtless result in an overestimate of the extent of longitudinal instability in occupational goals defined by three-digit codes, it is also useful to examine more broadly defined change in occupational aspirations. For this purpose the occupational aspirations have been grouped into eleven categories, namely the 10 one-digit major occupation groups and "don't know." Even in this case, small sample sizes prohibit an exhaustive enumeration (e.g., in the form of transition matrices), and controlling for level of

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16 Note that precisely the same relationship obtains when one examines the "pure" stability rate defined as the percent with exactly the same aspiration at all four interviews.

Table 4.5 Net Stability Rate[a] of Selected 1966 Occupational Aspiration Categories, by Year of School Attending 1969 and Color: Students Interviewed All Four Years Who Expressed a Definite Occupational Goal in 1966[b]

Selected 1966 occupational aspirations and year of school attending in 1969	WHITES		BLACKS	
	Total number (thousands)	Stability rate[a]	Total number (thousands)	Stability rate[a]
Professional, technical				
High school	252	25	49	18
College 1	398	17	26	c
College 2-3	495	25	43	29
College 4 or above	459	39	24	b
Total	1,604	27	142	27
Blue-collar[d]				
High school	114	26	26	c
Total	157	21	37	15
All other occupations				
High school	79	b	17	c
College	197	16	11	c
Total	276	19	28	c
Total	2,037	25	207	23

a Percentage with the same three-digit occupational goal in 1969 as in 1966, irrespective of intervening revisions.

b This is a further restriction of the universe described in note a, Table 4.1, p. 106.

c Percentage not shown where base represents fewer than 25 sample cases.

d Includes craftsmen, foremen, operatives and nonfarm laborers.

schooling compounds the difficulty. Consequently, the data presented are restricted to young men whose 1966 aspirations were professional or technical occupations (Table 4.6).[17] Of course, the broader definition of occupational aspiration results in much higher stability rates. As compared to the stability rates of 15-40 percent when three-digit codes were used (Table 4.5), the rates using one-digit codes range from 60 to 95 percent (Table 4.6). Most changes in aspirations occur within, not across, traditionally defined occupational strata.

IV RELATION BETWEEN REVISIONS OF EDUCATIONAL AND OCCUPATIONAL GOALS

In addition to comparing the separate patterns of change in educational and occupational goals, it is useful to examine the relation of these patterns to each other. We are able to make a beginning at this effort by examining the joint stability rate of educational and occupational goals, controlling for type of occupational goal in 1966 and year of school attending in 1969. Only 15 percent of the white students and 11 percent of the black maintained both their schooling and career aspiration over the three-year period (Table 4.7). Those youth who were enrolled in college at the initial survey (i.e., those in college 4 or above in 1969) exhibit a much higher joint stability rate than do those who were in junior or senior high school in 1966. This latter difference holds for both color groups and within the group whose initial occupational desire was a professional/technical job. There is no evidence of a consistent intercolor difference in the joint stability of educational and occupational goals. Although the rates are lower, these observations all apply with equal force to the joint stability of educational expectations and occupational aspirations (Table 4A-3).

Even though the joint stability rates are low, they are indicative of a positive correlation between occupational and educational goal revisions.[18] Further evidence in support of this positive correlation is that youth who raised their occupational sights were half-again as likely as those who lowered theirs to have raised their educational goals (Table 4.8). Symmetrically, the youth with diminished occupational aspirations were more than twice as likely as those with raised aspirations to have lowered their educational goal. In addition, this correlation

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17 The universe described in Table 4.6 is somewhat larger than those of 4.4 and 4.5 because it includes some respondents who were not interviewed in 1967, 1968, or both years.

18 Of course, the joint rate is mathematically constrained to be no higher than the lower of the two individual rates.

Table 4.6 Type of Occupational Aspiration 1969, by Year of School Attending 1969 and Color: Students Who Aspired to Professional or Technical Occupations as of 1966[a]

(Percentage distribution)

Type of occupational aspiration 1969	High school	College		
		Total	1-3	4 or above
	WHITES			
Professional, technical	67	84	82	88
Other white collar	13	9	9	8
Blue collar	8	1	b	1
Other occupation	4	1	2	0
Don't know	8	5	7	3
Total percent	100	100	100	100
Total number (thousands)	369	1,630	1,076	554
	BLACKS			
Professional, technical	60	81	95	
Other white collar	16	19	5	
Blue collar	21	0	0	c
Other occupation	0	0	0	
Don't know	3	0	0	
Total percent	100	100	100	
Total number (thousands)	55	107	78	29

a This is a further restriction of the universe described in note a, Table 4.1, p. 106.

b Between 0.1 and 0.5 percent.

c Percentage distribution not shown where base represents fewer than 25 sample cases.

Table 4.7 Joint Stability Rate of Educational and Occupational Aspirations 1966-1969[a], by Type of Occupational Goal 1966, Year of School Attending 1969 and Color: Students Who Expressed a Definite Occupational Goal in 1966[b]

1966 occupational goal and year of school attending 1969	WHITES		BLACKS	
	Total number (thousands)	Joint stability rate[a]	Total number (thousands)	Joint stability rate[a]
Professional, technical				
High school	368	16	56	13
College 1	479	10	34	3
College 2-3	605	10	45	16
College 4 or above	565	29	33	25
Total	2,018	16	168	14
Blue collar				
High school	143	18	30	6
Total[c]	196	13	42	6
Other				
High school	113	8	20	d
College 1-3	197	11	8	d
Total[c]	379	10	31	11
Total				
High school	624	15	107	12
College 1	566	9	48	4
College 2-3	761	10	52	14
College 4 or above	641	27	35	23
Total	2,592	15	241	11

a Percent with the same educational goal and the same three-digit occupational aspiration in 1966 and 1969.

b This is a further restriction of the universe described in note a, Table 4.1, p. 106.

c Total includes those attending schooling levels not shown separately.

d Percent not shown where base represents fewer than 25 sample cases.

Table 4.8 Comparison of Educational Goals 1966 and 1969, by Type of Occupational Aspiration 1966, Direction of Change in Occupational Aspiration 1966-1969[a] and Color: Students Who Expressed Different and Definite Occupational Aspirations in 1966 and 1969[b]

(Percentage distribution)

Comparison of educational goal 1966-1969	Professional, technical		All other occupations	
	1969 aspiration		1969 aspiration	
	Higher[a]	Lower[a]	Higher[a]	Lower[a]
	WHITES			
1969 higher	38	25	45	
1969 = 1966	52	46	39	
1969 lower	10	29	16	c
Total percent	100	100	100	
Total number (thousands)	414	676	302	83
	BLACKS			
1969 higher	54	17	43	
1969 = 1966	39	45	50	
1969 lower	7	38	7	c
Total percent	100	100	100	
Total number (thousands)	38	69	43	8

a Direction of change in occupational aspirations is determined by the sign of the arithmetic difference (1969 minus 1966) between the Duncan indexes associated with the aspirations. Respondents with differences of $\pm$ 4 points are omitted from this table. Thus, higher (lower) aspirations in 1969 means that the index of the goal expressed in 1969 was at least 5 points greater (less) than the index of the goal expressed in 1966.

b This is a further restriction of the universe described in note a, Table 4.1, p. 106.

c Percentage distribution not shown where base represents fewer than 25 sample cases.

appears to be stronger among blacks than among whites.[19] Once again, analogous associations are observable between educational expectations and occupational aspirations (Table 4A-4). Although not shown here, the data for whites also indicate that the size of the occupational aspiration change is positively related to the directional probability of educational goal revision. For example, of those who raised their occupational aspirations by at least 15 points, 46 percent raised their educational goals; whereas the comparable proportion among youth whose aspirations rose by 5-14 points was 33 percent.

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19 The apparently incongruous behavior by youth who raised (lowered) their occupational aspiration while lowering (raising) their educational aspiration cannot be investigated with the tabulations currently available. However, it is worthy of note that the incongruity may be only superficial, partly because the correlation between occupational status and years of school completed is less than one. For example, it is plausible that a youth could have revised his goals from a bachelor's degree in chemical engineering to a master's degree in mechanical engineering. These changes would be recorded as a decrease in (status of) occupational aspiration (from 90 to 82 on Duncan's socioeconomic index) and an increase in educational goal. It is also probable that some of the instances of revision of occupational and educational goals in opposite directions represent the fact that in 1966 the two goals were inconsistent. For example, in 1966 about one-fifth of the white high school students who aspired to white-collar jobs also aspired to complete fewer than four years of college, while one-fifth of the aspirants to blue-collar jobs wanted to finish four or more years of college. Parnes et al., Career Thresholds, 1:174.

APPENDIX TABLES

CHAPTER FOUR

Table 4 A-1 Net Change in Educational Expectation 1966 to 1969, by Year of School Attending in 1969 and Color: Students Who Expressed a Definite Occupational Aspiration in 1966[a]

(Percentage distribution)

Net change in educational expectation 1966-69	Year of school attending in 1969				
	High school	College			Total
		1	2-3	4 or above	
	WHITES				
Upward	43	32	40	30	36
No change	31	51	45	63	48
Downward	26	17	15	7	16
Total percent	100	100	100	100	100
Total number (thousands)	624	566	761	641	2,592
	BLACKS				
Upward	49	39	57	37	47
No change	35	54	27	52	39
Downward	16	7	16	11	14
Total percent	100	100	100	100	100
Total number (thousands)	107	48	52	35	241

a This is a further restriction of the universe described in note a, Table 4.1, p. 106.

Table 4A-2 Type of Occupational Aspiration 1966 and 1969, by Year of School Attending and Color: Students[a]

(Percentage distribution)

Selected type of occupational aspiration	Year of school attending							
	High school 1-3		High school 4		College 1-3		College 4 or above	
	1966 goal	1969 goal	1966 goal	1969 goal	1966 goal	1969 goal	1966 goal	1969 goal
	WHITES							
Professional, technical	26	28	46	50	66	73	78	82
Other white collar[b]	2	2	8	13	9	13	9	14
Blue collar	36	47	14	20	3	2	1	d
Other[c]	6	6	6	4	3	2	1	1
Don't know	30	17	26	13	19	10	12	2
Total percent	100	100	100	100	100	100	100	100
Total number (thousands)	121	121	742	742	1,679	1,679	776	776
	BLACKS							
Professional, technical	19	33	53	46	72	90	89	75
Other white collar[b]	9	10	14	22	6	7	0	25
Blue collar	35	42	19	24	11	1	0	0
Other[c]	5	0	3	1	1	1	7	0
Don't know	32	15	11	8	9	1	4	0
Total percent	100	100	100	100	100	100	100	100
Total number (thousands)	35	35	92	92	110	110	36	36

a See note a, Table 4.1, p. 106.
b Includes managerial, clerical and sales occupations.
c Includes service, farm and military occupations.
d Between 0.1 and 0.5 percent.

Table 4A-3 Joint Stability Rate of Educational Expectation and Occupational Aspiration 1966-1969[a], by Type of Occupational Goal 1966, Year of School Attending 1969 and Color: Students Who Expressed a Definite Occupational Goal in 1966[b]

1966 occupational goal and year of school attending 1969	WHITES		BLACKS	
	Total number (thousands)	Stability rate[a]	Total number (thousands)	Stability rate[a]
Professional, technical				
High school	368	12	56	10
College 1	479	7	34	3
College 2-3	605	13	45	11
College 4 or above	565	25	33	13
Total	2,018	14	168	10
Blue collar				
High school	143	0	30	6
Total[c]	196	0	42	4
Other				
High school	113	4	20	d
College 1-3	197	8	8	d
Total[c]	379	6	31	2
All occupations				
High school	624	8	107	8
College 1	566	7	48	2
College 2-3	761	12	52	10
College 4 or above	641	22	35	13
Total	2,592	12	241	8

a Percent with same educational expectation and the same three-digit occupational aspiration in 1966 and 1969.

b This is a further restriction of the universe described in note a, Table 4.1, p. 106.

c Total includes those attending schooling levels not shown separately.

d Percent not shown where base represents fewer than 25 sample cases.

Table 4A-4 Comparison of Educational Expectations 1966 and 1969, by Type of Occupational Aspiration 1966, Direction of Change in Occupational Aspiration 1966-1969[a] and Color: Students Who Expressed Different and Definite Occupational Aspirations in 1966 and 1969[b]

Comparison of educational expectation 1966-1969	1966 occupational aspiration			
	Professional, technical		All occupations	
	1969 aspiration		1969 aspiration	
	Higher[a]	Lower[a]	Higher[a]	Lower[a]
	WHITES			
1969 higher	42	26	44	30
1969 = 1966	53	45	48	44
1969 lower	5	29	8	26
Total percent	100	100	100	100
Total number (thousands)	414	676	716	759
	BLACKS			
1969 higher	56	20	60	21
1969 = 1966	37	51	34	50
1969 lower	7	29	6	29
Total percent	100	100	100	100
Total number (thousands)	38	69	79	77

a Direction of change in occupational aspirations is determined by the sign of the arithmetic difference (1969 minus 1966) between the Duncan indexes associated with the aspirations. Respondents with differences of $\pm$ 4 points are omitted from this table. Thus, higher (lower) aspirations in 1969 means that the index of the goal expressed in 1969 was at least 5 points greater (less) than the index of the goal expressed in 1966.

b This is a further restriction of the universe described in note a, Table 4.1, p. 106.

CHAPTER FIVE*

SUMMARY AND CONCLUSIONS

I INTRODUCTION

With the 1969 wave of interviews, we have completed two-thirds of the data collection for our longitudinal survey of young men who were between the ages of 14 and 24 when the study began. Of the 5,225 members of the sample originally interviewed, about three-fourths (78.5 percent of the whites and 72.9 percent of the blacks) were reinterviewed in 1969. As has been pointed out in earlier volumes in this series, the principal cause of attrition from the sample has been entrance to military service, and there is reason to hope that much of this attrition represents only temporary absence from the sample.

The purpose of this progress report has been to analyze the magnitudes and patterns of change in the personal characteristics and in the educational and labor market status of the youth up to the time of the 1969 survey. The following observations indicate the substantial amount of change during the 36-month period between the 1966 and 1969 interviews: (1) one-third of the young men made a change in their school enrollment status, (2) one-fifth changed their marital status and (3) more than 10 percent of the students and more than 25 percent of the nonstudents changed county (or SMSA) of residence at least once (pp. 6-11).

II LABOR MARKET EXPERIENCES OF HIGH SCHOOL GRADUATES AND DROPOUTS

In order to address some of the questions often raised about the effects of leaving school prior to graduation from high school, we have compared the post-school labor market experiences of young men with exactly 12 and those with fewer than 12 years of education who were not enrolled at the time of the 1969 interview. Although there are visible and systematic differences in labor market experience in favor of graduates vis-a-vis dropouts, despite the longer labor market exposure of the latter, it is necessary to acknowledge the strong possibility that both dropping out and unfavorable labor market experience are the result of disadvantages which predate departure from school. For example, our measure of mental ability (gathered from school records) exhibits distinct differences in favor of graduates (pp. 30-31).

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* This chapter was written by Andrew I. Kohen.

The following are the major differences in labor market experience between the graduates and dropouts. (1) Graduates exhibit a higher rate of labor force participation, a lower rate of unemployment, and a greater likelihood of being employed full time, although the gaps appear to narrow with increasing labor market experience (pp. 32-37). (2) Holders of a high school diploma occupy noticeably higher rungs on the occupational ladder than do young men with less than 12 years of schooling and, among whites, the disparity in occupational distribution appears to widen over time (pp. 35-39). (3) Graduates were much more likely than dropouts to have participated in a formal occupational training program between 1966 and 1969 (p.44). (4) Possibly as a consequence of this difference in training, although the monetary advantages of completing high school over dropping out are not realized immediately, by the third year after leaving school hourly rates of pay of graduates are higher than those of dropouts, i.e., the beneficial effect of labor market exposure on wages seems to be stronger for those with a high school diploma than for those without it (pp. 39-40). (5) Dropouts are more mobile between employers than are graduates. This is vividly illustrated by the fact that only one-fifth of the white graduates, in contrast to two-fifths of the white dropouts, changed employers three or more times during the period (pp. 42-43).

In addition to the behavioral and experiential differences which distinguish high school graduates from nongraduates there are discernible differences in two labor-market-related attitudes (pp. 44-50). First, young men with a high school diploma are more likely than those without one to manifest a strong commitment to work. Second, staying in school through high school graduation is positively associated with a strong sense of personal efficacy. Because this psychological trait (i.e., internality/externality) was measured after most of the men discontinued their schooling, it is not possible to be certain of causal direction. However, it is plausible that both more schooling and more favorable labor market experience contribute to the greater sense of personal control expressed by the high school graduates.

Finally, there is some evidence that discontinuation of schooling prior to completing high school is associated with more unfavorable labor market experience for a young black man than for a young white man. The data on unemployment and on hourly earnings indicate that the graduate/dropout gap is wider among blacks than among whites. Furthermore, with the passage of time this gap narrows more (widens less) for whites than for blacks. Stated somewhat differently, the intercolor differences in labor market experience are more pronounced for dropouts than for graduates.

III LABOR MARKET EXPERIENCES OF OUT-OF-SCHOOL YOUTH

In order to examine the dynamics of labor market experience over the entire 36-month period between the first and fourth interviews we focused on the group of young men who have been out of school at each

of the four survey dates. Overall, this group exhibited substantial stability of labor force participation, but disaggregation of the data by age reveals a noticeable positive effect of "aging" on the rate of survey-week labor force participation. The beneficial impact of "aging" on the probability of being unemployed is also evident, notwithstanding the deterioration of the labor market for young men which occurred between the Autumn of 1968 and the Autumn of 1969 (pp. 52-54).

Interfirm Movement

During the three-year period under investigation about three-fifths of the white and seven-tenths of the black young men changed employers at least once. The probability of having made a change and the probability of having made more than one change are inversely related to age, socioeconomic status of occupation, and hourly wage in the initial year (pp. 54-60). In addition, there is strong evidence that those who change employers improve their economic position relative to nonchangers, though for whites there appear to be "diminishing returns" to interfirm mobility (pp. 57-60). Finally, in most age-occupation groups young black men were more likely than their white counterparts to have made one or more interfirm shifts.

In order to differentiate between voluntary and involuntary job changes we directed our attention to the 24-month period between the second (1967) and fourth (1969)interviews.[1] During this time approximately one-half of the employed young men made at least one interfirm shift. Among whites 80 percent of the changers shifted voluntarily while among blacks the corresponding proportion is 60 percent. In addition, men who left their 1967 job voluntarily made fewer job changes between 1967 and 1969 than did those who left their 1967 employer involuntarily. In general, the higher overall rate of interfirm movement among blacks than among whites is attributable to the higher rate of involuntary separation for blacks.

The data provide strong support for the generalization that interfirm movement declines sharply with increasing job tenure. For example, among whites, those with less than one year's service in the 1967 job were twice as likely as those with three or more years of service to change jobs voluntarily (49 versus 24 percent) and seven times as likely to change involuntarily (15 versus 2 percent). An interesting interaction was found between the effects of occupation and tenure on the probability of interfirm movement. That is, among short-service workers the occupational differentials in rates of movement appear to be attributable to occupational differences in the probability of involuntary separation, whereas among those with longer service (three or more years) the source is occupational differences in the rate of voluntary movement (pp. 61-62).

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1 For elaboration see p. 51. n. 3.

A rather surprising finding was that, irrespective of tenure, among blue-collar workers educational attainment is negatively associated with the rate of voluntary job changing; suggesting that less-skilled youth may be more venturesome in their labor market behavior and perhaps more attentive to alternatives for improving their economic positions (p. 64). Another set of results indicates that certain attitudinal traits of young workers have some power in predicting interfirm movement (pp. 64-68). First, our measure of mobility propensity (based on a series of hypothetical-job-offer questions in 1966) shows a monotonic positive relationship with the actual rate of voluntary job changing among whites, but not among blacks. Second, for both color groups, the degree of job satisfaction expressed in 1967 is negatively related to the probability of voluntarily having left that job between 1967 and 1969.

Three additional variables which are found to be correlated with interfirm movement are acquisition of occupational training, extent of unemployment experience, and percentage increase in earnings (pp. 72-75). Among some groups of young men (e.g., those with less than 12 years of schooling) job changers were more likely than nonchangers to have received formal training during the period. The data also show that, irrespective of color, young men who changed employers involuntarily experienced more than seven times as many weeks of unemployment as those who remained with the same employer. The corresponding ratio for the comparison between voluntary movers and nonmovers was 5:1. Among whites this relationship between unemployment and job changing serves to offset the relationship between wage change and job change--i.e., the growth in annual earnings from 1966-67 to 1968-69 is smaller for changers than for nonchangers.[2] In contrast, among blacks the greater wage increases associated with employer changing more than offset the increased joblessness to produce higher growth in annual earnings for those who changed employers. In fact, the average annual earnings of changers was above that of nonchangers in 1968-69, whereas the opposite was true in 1966-67.

Occupational Change

Occupational change (defined here in terms of change between one-digit occupation categories) by out-of-school youth is another aspect of labor mobility which has been examined. Whether one considers the time between the first job after leaving school and the job in 1969 or the shorter period between 1966 and 1969 jobs, young men evidence a substantial amount of occupational movement (pp. 77-78). For example, less than three-tenths of the men were in the same major occupation group in 1969 as the one in which they served their first job. In general, the patterns of change reflect the occupational progress expected as careers unfold--e.g., declines in the occupancy of laborer, service and farm jobs,

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2 In order to focus on the effect of employer change, these results are based on only those who remained in the same major occupation group from 1967 to 1969.

and an increase in the occupancy of high-level white-collar positions. Many intercolor differences in the pattern of occupational change yield the interpretation that the socioeconomic gap between the color groups was wider in 1969 than when these men first left school.

Age and education are also shown to be correlates of occupational change (pp. 79-82). Thus, men under 24 in 1969 exhibit more changes between 1966 and 1969 than do their counterparts who were 24 to 27 years old in 1969. This undoubtedly reflects the following facts: (1) by 1966 proportionately more of the older (24 to 27) men had settled into what will be lifetime occupations, whereas many of the younger (17 to 23) men were still experimenting and occupying "apprentice"-level positions in 1966; (2) between 1966 and 1969 many members of the younger group were "outgrowing" the constraints of child-labor laws and facing a wider set of occupational options. Irrespective of age or color, high school graduates advanced more between their initial and 1969 jobs than did their counterparts with less than 12 years of education. For these men without college training, advancement assumed the form of movement up the blue-collar hierarchy and, for whites, some movement into self-employment. For the only age-color group (i.e., whites 24 to 27) containing enough sample cases of men who completed some college, the main occupational shifting between first and 1969 jobs is toward managerial and sales positions and away from clerical jobs.

Controlling statistically for age, education, and occupation of first job does not alter the conclusion that the intercolor difference in the pattern of occupational movement has resulted in widening the socioeconomic disparity between whites and blacks. While both groups exhibit perceptible upward movement, the types of changes made by blacks are ostensibly less desirable than those made by whites. For example, among blacks whose first job was as an operative 62 percent were operatives or nonfarm laborers in 1969 and only 15 percent were craftsmen. The corresponding percentages for whites who began as operatives were 43 percent and 30 percent, respectively. From a "standardization" of occupational movement patterns it can be seen that the relationship between initial and current (1969) occupation is stronger among young whites than among young blacks (pp. 84-86). Yet this has not worked to the relative advantage of the blacks, since their movement out of low-status entry-level occupations seems to be more haphazard than is true of the whites.

In addition to examining paths of occupational change, we have begun to investigate the paths which the young men hope to pursue in the future (pp. 86-90). To summarize these findings most succinctly, one may observe that even after four years of participating in the labor market on a full-time basis, young men exhibit a substantial residue of unreality in their occupational aspirations. More than 40 percent of the white and 60 percent of the black young men aspire (in 1969) to a job at age 30 in a major occupation group different from that in which they are currently (1969) employed, and the types of occupational movement implied by the expressed goals would require a return to formal

schooling at a rate which seems highly improbable. Irrespective of age and education, the professed aspirations of employed young black men are more fanciful than those of their white counterparts.

Wage Change

To conclude the study of the three-year labor market experiences of out-of-school youth we examined the changes in hourly rate of pay for those who were employed as wage and salary workers in both 1966 and 1969 (pp. 90-94). The average young white man in this group experienced a 53 percent increase in hourly earnings between those dates, while the figure for his black counterpart was 68 percent. Although this resulted in some diminution of the relative intercolor differential in wages, in 1969 young whites were still earning about a third more per hour than young blacks. As was mentioned above, the rate of wage increase over the period shows a positive relationship with interfirm movement. Finally, our longitudinal data indicate that in the early portion of the life-cycle there is no systematic relationship between measured mental ability, net of schooling, and the rate of increase in hourly earnings. While our measure of ability exhibits a positive relationship (independent of education) with hourly wage in both the 1966 and 1969 cross-sectional data, no regular association is discernible between ability and the measure of longitudinal change in hourly rate of pay.

IV CHANGES IN THE EDUCATIONAL AND OCCUPATIONAL GOALS OF STUDENTS

Our examination of two attitudinal dimensions of the lives of young men continuously enrolled in school since the initial survey reveals a vast amount of longitudinal change. Consistent with general theories about stages of career choice formation, these young men exhibited tremendous instability of educational and occupational goals. Changed educational goals were observed among nearly one-half of the youth (pp. 104-109) and revised occupational aspirations characterized about three-fourths of them (pp. 109-116). The younger students can definitely be identified as passing through what one theorist has entitled the "tentative substage of the exploration stage,"[3] while those who were attending college at the outset of the period evidence considerably more stable goals. By and large, intercolor differences in goal revision were small, though blacks tended to be less indecisive in expressing a career choice. For both color groups, changes in occupational preferences occurred mainly within, not across, traditionally defined major occupational categories. Finally, though they permit no inferences regarding growing or diminishing congruence of goals, the data do indicate a substantial positive correlation between changes in educational and occupational aspirations (pp. 116-120).

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3 See Super et al., Career Development: Self-Concept Theory.

APPENDIXES

APPENDIX A

NOTE ON TABLES

The tables in this report have a number of characteristics that deserve some comment. In a study of this kind, interest generally focuses on relative rather than absolute magnitudes, e.g., the proportions of white men and of black men who have a given characteristic, rather than their numbers. Accordingly, data in virtually all tables are presented in terms of percentages. In all cases, however, the base of each percentage is shown, so that its statistical reliability can be estimated. In calculating percentage distributions, cases for which no information was obtained are excluded from the total. This amounts to assuming that those who did not respond to a particular question do not differ in any relevant respect from those who did.[1] All percentage distributions, therefore, should add up to 100 percent; when they do not, it is because of rounding. It should be observed, however, that when absolute numbers do not add to the indicated total, the difference is attributable (unless otherwise noted) to cases for which no information was obtained, as well as to rounding.

Percentages in most tables have been rounded to the nearest whole percentage point. To record them to the nearest tenth would clutter the tables unnecessarily and create the impression of a degree of accuracy that does not in fact exist. To be statistically significant, differences in percentages in this study generally have to be at least several percentage points; thus, there is not much purpose in expressing percentages to the nearest tenth of a point. There are a few exceptions to this general rule. For example, because labor force participation rates are so high and their bases so large, their standard errors are quite small; hence very small differences may be significant.

With rare exceptions, our tables involve at least three-way cross-classifications in which color is almost always one of the variables. Our purpose is generally to ascertain how an independent variable interacts with color to "explain" some aspect of labor market behavior. For example, are marital status and labor force participation related in the same way for black men as for white men? Since we are much more interested in this type of question than in the relation between

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1 Nonresponse rates exceed 10 percent in only a very few variables. In these cases, nonresponse bias, if suspected, has been taken into account in the interpretation.

two variables for the total population irrespective of color, most of our tables omit the totals for blacks and whites combined. It might be mentioned that because of the overwhelming numerical importance of the whites, the distribution of the total population by any variable resembles very closely the distribution of the whites.

Percentages are not shown in table cells if the base is fewer than 25 sample cases. In our interpretations, of course, we are mindful of sampling error and, as a rough rule of thumb, we are inclined not to say anything about percentages based upon fewer than 50 sample cases, for sampling error in such cases may be very high. For example, the standard error of a percentage in the neighborhood of 50 is about 10 percentage points when the base is 50 sample cases; for percentages near 5 and 95, the standard error is about 4 percentage points. The reader who wishes to observe the same cautions in interpreting the tables should keep in mind that the "blown up" population figure corresponding to 50 sample cases is approximately 184 thousand for whites and about 63 thousand for blacks.

APPENDIX B

GLOSSARY

AGE

Age of respondent as of last birthday prior to April 1, 1969.

"ANNUAL" EARNINGS

The sum of wages, salaries, commissions and tips (before deduction) earned by the respondent during the 12-month period prior to the survey.

ATTACHMENT TO 1966 JOB: See PROSPECTIVE INTERFIRM MOBILITY

ATTRITION RATE

The attrition rate between year x and year y is the proportion of respondents interviewed in year x who were not reinterviewed, for whatever reason, in year y. The "noninterview rate" between year x and year y is the proportion of respondents in year x who were not interviewed in year y for reasons other than entry into the armed forces.

CLASS OF WORKER

Wage and Salary Worker

A person working for a rate of pay per time-unit, commission, tips, payment in kind, or piece rates for a private employer or any government unit.

Self-employed Worker

A person working in his own unincorporated business, profession, or trade, or operating a farm for profit or fees.

Unpaid Family Worker

A person working without pay on a farm or in a business operated by a member of the household to whom he is related by blood or marriage.

COLOR

In this report the term "blacks" refers only to Negroes; "whites" refers to Caucasians. Thus, there is a difference in terminology between this report and the first two volumes of this series in which "blacks" referred to the group now referred to in U.S. Government reports as "Negro and other races."

COMMITMENT TO WORK

A three-category measure (High, Low, Uncertain) based on the respondent's answer (yes, no, undecided), to a question of whether he would work even if he had enough money to live comfortably without working. Measured in 1969.

COMPARATIVE JOB STATUS 1967-1969

A measure of whether the respondent worked for the same employer in 1969 as in 1968 and 1967 and, if he did not, whether he left the 1967 employer voluntarily or involuntarily. The coding procedure involves classifying those with the same employer in 1969 and 1967 but with a different employer in 1968 as having changed employers. For respondents not employed at the 1968 survey the reason for leaving the job actually refers to the most recent job prior to the 1968 survey.

CURRENT POPULATION SURVEY

Monthly survey of the population conducted by the U.S. Bureau of the Census to estimate the size and characteristics of the labor force.

DISEMPLOYMENT RATE

The proportion of respondents employed during the survey week of the earlier year who are unemployed or out of the labor force in the survey week of the later year.

EDUCATIONAL ATTAINMENT: See HIGHEST YEAR OF SCHOOL COMPLETED

EDUCATIONAL GOALS (ASPIRATIONS)

Total number of years of regular school that the respondent would like to achieve.

Net Change 1966-1969

The difference between the educational goal stated by the respondent in 1969 and the goal stated in 1966. The categories "upward" and "downward" designate difference of at least one year.

Pattern of Revision 1966-1969

A measure of change based on aggregating the three pair-wise comparisons of goals between adjacent years. Thus, an "upward" change can occur in seven different ways--(i.e., +++, ++=, +=+, =++, +==, =+=, ==+). The "uncertain" category is composed of all respondents who made at least two revisions in opposite direction.

EMPLOYED: See LABOR FORCE AND EMPLOYMENT STATUS

FIRST JOB

The first job at which the respondent worked for two or more consecutive weeks after discontinuing regular school.

GEOGRAPHIC MOVEMENT: See MIGRATION

HIGHEST YEAR OF SCHOOL COMPLETED

The highest year finished by the respondent in "regular" school, where years of school completed are denoted 9-11, 12, 13-15, etc.

HOURLY RATE OF PAY

Compensation--in dollars--for work performed. This is limited to wage and salary workers because it is virtually impossible to ascertain to what extent the earnings of the self-employed are wages as opposed to other kinds of returns. If a time unit other than an hour was reported, hourly rates were computed by first converting the reported figure into a weekly rate and then dividing by the number of hours usually worked per week.

HOURS WORKED DURING SURVEY WEEK

The total number of hours worked at all jobs held by the respondent during the calendar week preceding the date of interview.

INTERFIRM MOVEMENT 1966-1969

A measure of the number of times a respondent changed employers between the 1966 and 1969 surveys, irrespective of the reason for change. The measure is defined in terms of three pair-wise comparisons of current (or last) employer at the successive survey dates. It does not count multiple shifts between two successive surveys.

INTERFIRM MOVEMENT 1967-1969: See COMPARATIVE JOB STATUS 1967-1969

INTERNAL/EXTERNAL (I-E) SCALE: See LOCUS OF CONTROL

INVOLUNTARY JOB CHANGE(R)

A change of employer occasioned by the respondent being discharged or permanently laid off.

JOB

A continuous period of service with a given employer.

Current (or Last) Job

For those respondents who were employed during the survey week: the job held during the survey week. For those respondents who were either unemployed or out of the labor force: the most recent job.

KNOWLEDGE OF THE WORLD OF WORK: See OCCUPATIONAL INFORMATION TEST

LABOR FORCE AND EMPLOYMENT STATUS

In the Labor Force

All respondents who were either employed or unemployed during the survey week.

Employed

All respondents who during the survey week were either (1) "at work"--those who did any work for pay or profit or worked without pay for 15 hours or more on a family farm or business; or (2) "with a job but not at work"--those who did not work and were not looking for work, but had a job or business from which

they were temporarily absent because of vacation, illness, industrial dispute, bad weather, or because they were taking time off for various other reasons.

Unemployed

All respondents who did not work at all during the survey week and (1) either were looking or had looked for a job in the four-week period prior to the survey; (2) were waiting to be recalled to a job from which they were laid off; or (3) were waiting to report to a new job within 30 days.

Out of the Labor Force

All respondents who were neither employed nor unemployed during the survey week.

LABOR FORCE PARTICIPATION RATE

The proportion of the total population or of a subgroup of the population classified as "in the labor force."

LENGTH OF SERVICE IN 1967 JOB

The total number of years spent by the respondent in the job in which he was employed during the 1967 survey week.

LOCUS OF CONTROL

The respondent's score on an 11-item scale designed to measure his perception of the extent to which he controls his own life. See Appendix F for elaboration.

MARITAL STATUS

Respondents are classified into the following categories: married, spouse present; married, spouse absent; divorced; widowed; separated; and never married. The term "married" in the text includes those respondents who are married, spouse present, in the survey week. "Nonmarried" includes all others.

MENTAL ABILITY

The stanine score assigned to the respondent based on a standardized measure of intellectual ability, where the latter was derived from information provided by the most recent secondary school attended by the respondent. For elaboration see Appendix E. Stanine scores represent a condensation of a normal distribution into the following nine categories: 9 = highest 4 percent, 8 = next 7 percent, 7 = next 12 percent, 6 = next 17 percent, 5 = middle 20 percent, 4 = next 17 percent, 3 = next 12 percent, 2 = next 7 percent, 1 = lowest 4 percent.

MIGRATION 1966 to 1969

This variable is based on a comparison of county (SMSA) of residence in the survey weeks of 1966 and 1968. Thus, migration is defined as a situation in which the county (SMSA) of residence differs between these two periods, and ignores intervening moves and returns that may have occurred.

OCCUPATION

The ten occupation groups are the ten one-digit classes used by the Bureau of the Census in the 1960 Census. The four types of occupation are white-collar (professional and technical workers; managers, officials, and proprietors; clerical workers; and sales workers); blue-collar (craftsmen and foremen, operatives, and nonfarm laborers); service; and farm (farmers, farm managers, and farm laborers).

OCCUPATION DESIRED AT AGE 30 (Occupational Aspiration)

The kind of work which the respondent would like to be doing when he is 30 years old. Measured at each survey.

OCCUPATIONAL ASPIRATION: See OCCUPATION DESIRED AT AGE 30

OCCUPATIONAL CHANGE

A change in occupational assignment from one one-digit Census category to another.

OCCUPATIONAL GOAL: See OCCUPATION DESIRED AT AGE 30

OCCUPATIONAL INFORMATION TEST (measured in 1966 survey only)

A series of questions designed to measure the extent of the respondent's information about the labor market. First, the respondent is asked to choose one of several job descriptions that best matches each of 10 specified job titles. Second, he is asked to indicate the amount of regular schooling typically achieved by men in each of the occupations. Third, he chooses from a pair of occupations the one in which he thinks average annual earnings is higher. For scoring procedure see Parnes et al., Career Thresholds, 1:120-21, n. 1.

OCCUPATIONAL TRAINING OUTSIDE SCHOOL

Program(s) taken outside the regular school system for other than social or recreational purposes. Sponsoring agents include government, unions, and business enterprises. A training course sponsored by a company must last at least six weeks to be considered a "program."

OUT OF THE LABOR FORCE: See LABOR FORCE AND EMPLOYMENT STATUS

PROSPECTIVE INTERFIRM MOBILITY (measured in 1966)

Relative increase in rate of pay for which an employed respondent would be willing to accept a hypothetical offer of employment in the same line of work with a different employer in the same local labor market area. The categories used are the same as for PROSPECTIVE GROGRAPHIC MOBILITY.

PSU (PRIMARY SAMPLING UNIT)

One of the 235 areas of the country from which the sample for this study was drawn; usually an SMSA (standard metropolitan statistical area) or a county.

REACTION TO HYPOTHETICAL JOB OFFER: See PROSPECTIVE INTERFIRM MOBILITY

SCHOOL ENROLLMENT STATUS

An indication of whether or not the respondent is enrolled in regular school during the survey week.

SELF-EMPLOYED: See CLASS OF WORKER

SURVEY WEEK

For convenience, the term "survey week" is used to denote the calendar week preceding the date of interview. In the conventional terminology of the Bureau of the Census, it means "reference week."

UNEMPLOYED: See LABOR FORCE AND EMPLOYMENT STATUS

UNEMPLOYMENT

Rate

The proportion of the labor force classified as unemployed.

Spell of

A continuous period of unemployment of at least one week's duration.

Weeks of

Number of weeks during which the respondent reported that he was looking for work or on lay-off from a job.

UNPAID FAMILY WORKER: See CLASS OF WORKER

VOCATIONAL TRAINING OUTSIDE SCHOOL: See OCCUPATIONAL TRAINING OUTSIDE SCHOOL

VOLUNTARY JOB CHANGE(R)

A change of employer occasioned by the respondent's having quit for any reason, including personal health, dislike of wages, working conditions or supervision, etc.

WAGE AND SALARY WORKERS: See CLASS OF WORKER

WAGE RATE: See HOURLY RATE OF PAY

WEEKS IN LABOR FORCE

Cumulative number of weeks that the respondent reported that he was either working, looking for work, or on lay-off from a job.

APPENDIX C*

SAMPLING, INTERVIEWING AND ESTIMATING PROCEDURES

The Survey of Work Experience of Young Men is one of four longitudinal surveys sponsored by the Manpower Administration of the U.S. Department of Labor. Taken together these surveys comprise the National Longitudinal Surveys.

The 1969 survey was the fourth of a series of six annual interviews conducted for the Survey of Work Experience of Young Men. The respondents were between the ages of 14 and 24 at the time of the first interview conducted in 1966; thus, the age range in 1969 was 17 to 27.

The Sample Design

The National Longitudinal Surveys are based on a multi-stage probability sample located in 235 sample areas comprising 485 counties and independent cities representing every state and the District of Columbia. The 235 sample areas were selected by grouping all of the nation's counties and independent cities into about 1,900 primary sampling units (PSU's) and further forming 235 strata of one or more PSU's that are relatively homogeneous according to socioeconomic characteristics. Within each of the strata a single PSU was selected by chance to represent the stratum. Within each PSU a probability sample of housing units was selected to represent the civilian noninstitutionalized population.

Since one of the survey requirements was to provide separate reliable statistics for Negroes and other races, households in predominantly Negro and other race enumeration districts (ED's) were selected at a rate three times that for households in predominantly white ED's. The sample was designed to provide approximately 5,000 interviews for each of the four surveys--about 1,500 Negroes and other races and 3,500 whites. When this requirement was examined in light of the expected number of persons in each age-sex color group it was found that approximately 42,000 households would be required in order to find the requisite number of Negroes and other races in each age-sex group.

An initial sample of about 42,000 housing units was selected and a screening interview took place in March and April 1966. Of this number about 7,500 units were found to be vacant, occupied by persons whose usual residence was elsewhere, changed from residential use, or demolished.

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* This appendix was written by Rachel Cordesman of the Longitudinal Surveys Branch, Demographic Surveys Division, U.S. Bureau of the Census.

On the other hand, about 900 additional units were found which had been created within existing living space or had been changed from what was previously nonresidential space. Thus, 35,360 housing units were available for interview; of these, usable information was collected for 34,662 households, a completion rate of 98.0 percent.

The original plan called for using this initial screening to select the sample for all sample groups. On reflection it was decided to rescreen the sample in the fall of 1966 prior to the first interview of males 14 to 24. Males in the upper part of that age group are the most mobile group in the entire population and a seven-month delay between the initial screening and the first interview seemed to invite problems.

To increase efficiency, it was decided to stratify the sample for the rescreening by the presence or absence of a 14- to 24-year-old male in the household. The probability is great that a household which contained a 14- to 24-year-old in March will also have one in September. However, we had to insure that the sample also represented persons who had moved into sample households in the intervening period, so that a sample of addresses which had no 14- to 24-year-old males was also included in the screening operation.

This phase of the screening began in early September 1966. Since a telephone number had been recorded for most households at the time of the initial interview, every attempt was made to complete the short screening interview by telephone.

Following this screening operation, 5,704 males age 14 to 24 were designated to be interviewed for the Survey of Work Experience. These were sampled differentially within four strata: whites in white ED's (i.e., ED's which contained predominantly white households), Negroes and other races in white ED's, whites in Negro and other races ED's, and Negroes and other races in Negro and other races ED's.

The Field Work

Three hundred and twenty-five interviewers were assigned to this panel. Many of the procedures and the labor force and socioeconomic concepts used in this survey were identical or similar to those used in the Current Population Survey (CPS); all the interviewers selected to work on this survey had CPS experience and most of them (92.3 percent) had also worked on at least one of the earlier panels of the National Longitudinal Surveys. Consequently, the quality of the interviewing staff was high and at the same time, the time and costs required for training were reduced.

Interviewer training consisted of a home study, consisting of a set of exercises covering the procedures and concepts explained in the reference manual, which was reviewed by a survey supervisor. In addition, those interviewers who had no previous experience with the longitudinal surveys attended one day of classroom training conducted by a supervisor.

The supervisor was provided with a "verbatim" training guide which included lecture material and a number of structured practice interviews which were designed to familiarize the interviewers with the questionnaire. All training materials were prepared by the Bureau staff and reviewed by the Manpower Administration and the Center for Human Resource Research of The Ohio State University. Twenty-five interviewers were trained in six training sessions held around the country. Professional staff members of the participating organizations observed the training sessions, and later, the actual interviewing.

Training began October 27, 1969, and the interviewing immediately thereafter. The interviewing continued until the middle of January. Completion of the field work was delayed for several reasons--the interviewers had to devote about one week a month to CPS, and a number of the interviewers had other surveys for which they were responsible. However, there were several other significant factors which affected the interviewer's ability to complete her assignment on time:

1. At least a year had passed since the respondent was last contacted and the listed addresses were obsolete for a number of the respondents. Therefore, a great deal of time was spent in locating respondents.

2. Most of the respondents were of draft age and some of them were in the armed forces, about to go in or had already completed their tour of duty and had been discharged.

3. Many respondents were attending school and/or working; thus, there were only certain times of the day that the respondent was potentially available for interviewing.

Of the 5,704 respondents originally selected for the sample, 5,225 cases were interviewed in 1966 for a completion rate of 91.6.

Summary, 1966 Interview

	Total sample selected	Total interviews	Nonresponse				
			Refusals	Armed forces	Moved	Other	Total
Total number	5,704	5,225	120	70	171	118	479
Percent of workload	100.0	91.6	2.1	1.2	3.0	2.1	8.4
Percent of nonresponse			25.1	14.6	35.7	24.6	100.0

The 5,225 young men who were interviewed in 1966 constituted the panel for the 1967 survey. Those cases which were nonresponses in 1966 were permanently dropped from the sample because there would be no base

year data for them. Fourteen respondents died between the 1966 and 1967 surveys, leaving 5,211 persons eligible to be interviewed for the 1967 survey. Interviews were obtained from 4,778 respondents for a completion rate of 91.7.

Summary, 1967 Interview

	Total eligible for interview	Total interviews	Nonresponse				
			Refusals	Armed forces	Unable to contact	Other	Total
Total number	5,211	4,778	65	276	71	21	433
Percent of workload	100.0	91.7	1.2	5.3	1.4	0.4	8.3
Percent of nonresponse			15.0	63.7	16.4	4.9	100.0

If a respondent was a nonresponse in 1967 for reasons other than refusal, another attempt was made in 1968 to obtain an interview with him. Of the 5,146 young men eligible for reinterview in 1968 (5,211 minus 65 refusals in 1967), 10 persons died between the 1967 and 1968 surveys. Interviews were obtained from 4,330 of the remaining 5,136 cases for a completion rate of 84.3.

Summary, 1968 Interview

	Total eligible for interview	Total interviews	Nonresponse				
			Refusals	Armed forces	Unable to contact	Other	Total
Total number	5,136	4,330	69	553	146	38	806
Percent of workload	100.0	84.3	1.4	10.8	2.8	0.7	15.7
Percent of nonresponse			8.6	68.6	18.1	4.7	100.0

With the exception of those who were noninterviews because they were in the armed forces, all eligible respondents who were noninterviews for two consecutive years were permanently dropped from the sample along with refusals. Forty-one respondents were dropped from the 1969 survey because they were noninterviews in 1967 and 1968, along with 69 refusals in 1968, leaving 5,026 respondents eligible for interview in 1969. Eleven died between the 1968 and 1969 surveys. Of the remaining 5,015, 4,033 were interviewed for a completion rate of 80.4.

Summary, 1969 Interview

	Total eligible for interview	Total interviews	Nonresponse				
			Refusals	Armed forces	Unable to contact	Other	Total
Total number	5,015	4,033	54	689	179	60	982
Percent of workload	100.0	80.4	1.1	13.7	3.6	1.2	19.6
Percent of nonresponse			5.5	70.2	18.2	6.1	100.0

A preliminary edit to check the quality of the completed questionnaires was done by the Data Collection Center staffs. This consisted of a "full edit" of each questionnaire returned by each interviewer. The editor reviewed the questionnaires from beginning to end to determine if the entries were complete and consistent and whether the skip instructions were being followed.

The interviewer was contacted by phone concerning minor problems, and, depending on the nature of the problem, was either merely told of her error and asked to contact the respondent for further information or for clarification, or, for more serious problems, was retrained, either totally or in part, and the questionnaire was returned to her for completion.

Estimating Methods

The estimation procedure implemented for this survey in 1966 was a multi-stage ratio estimate. The first step was the assignment to each sample case of a basic weight which took into account the over-representation of the Negro and other race strata, the rescreening procedure, and the sampling fraction of the stratum from which it was selected. The sample drawn from the white stratum was selected at an eight-out-of-nine ratio, while the selection for the sample for the Negro and other race stratum was a seven-out-of-eight ratio. Thus, from the Survey of Work Experience of Young Men, there were four different base weights reflecting the differential sampling by color within stratum (i.e., white ED's) during both the rescreening and selection operations.

1. Noninterview Adjustment

The weights for all interviewed persons were adjusted to the extent needed to account for persons for whom no information was obtained because of absence, refusals, or unavailability for other reasons. This adjustment was made separately for each of 24 groupings: Census region of residence (Northeast, North Central, South, West), by residence (urban, rural farm, rural nonfarm), by color (white, Negro and other races).

2. Ratio Estimates

The distribution of the population selected for the sample may differ somewhat, by chance, from that of the nation as a whole, in such characteristics as age, color, sex, and residence. Since these population characteristics are closely correlated with the principal measurements made from the sample, the latter estimates can be substantially improved when weighted appropriately by the known distribution of these population characteristics.[1] This was accomplished through two stages of ratio estimation, as follows:

a. First-Stage Ratio Estimation

This is a procedure in which the sample proportions were adjusted to the known 1960 Census data on the color-residence distribution of the population. This step took into account the differences existing at the time of the 1960 Census between the color-residence distribution for the nation and for the sample areas.

b. Second-Stage Ratio Estimation

In this final step, the sample proportions were adjusted to independent current estimates of the civilian noninstitutional population by age and color. These estimates were prepared by carrying forward the most recent Census data (1960) to take account of subsequent aging of the population, mortality, and migration between the United States and other countries.[2] The adjustment was made by color within five age groupings: 14 to 15, 16 to 17, 18 to 19, 20 to 21, and 22 to 24.

After this step, each sample person has a weight which remains unchanged throughout the five-year life of the survey. The universe of study was thus fixed at the time of interview for the first cycle. No reweighting of the sample is made after subsequent cycles since the group of interviewed persons is an unbiased sample of the population

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1 See U.S. Bureau of the Census, Technical Paper No. 7, "The Current Population Survey--A Report on Methodology" (Washington, D.C., 1963), for a more detailed explanation of the preparation of estimates.

2 See U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 352, November 18, 1966, for a description of the methods used in preparing these independent population estimates.

group (in this case, civilian noninstitutionalized males age 14 to 24) in existence at the time of the first cycle only.

Coding and Editing

Most of the data could be punched directly from the questionnaire, since many of the answers were numerical entries or in the form of precoded categories. However, the Bureau's standard occupation and industry codes which are used in the monthly CPS were also used for the job description questions and these codes are assigned clerically. In addition, the answers for all the "open-end" questions had to be clerically coded, using categories which were previously developed in conjunction with the Center for Human Resource Research from hand tallies of a subsample of completed questionnaires.

The consistency edits for the questionnaire were completed on the computer. A modification of the CPS edit was used for the parts of the questionnaire which were similar to CPS; separate consistency checks were performed for all the other sections. None of the edits included an allocation routine which was dependent on averages or random information from outside sources, since such allocated data could not be expected to be consistent with data from subsequent surveys. However, where the answer to a question was obvious from others in the questionnaire, the missing answer was assigned to the item on the tape. For example, if item 15b ("Do you have a scholarship, fellowship, assistantship, or other type of financial aid this year?") was blank, but legitimate entries appeared in 15c and d ("What kind?" and "How much is it per year?") a "Yes" was inserted in 15b. In this case, only if 15b was marked "Yes," could 15c-d be filled; therefore, the assumption was made that either the key punch operator failed to punch the item or the interviewer failed to mark it.

Further, some of the status codes which depend on the answers to a number of different items were completed using only partial information. For example, the current employment status of the respondent (that is, whether he was employed, unemployed, or not in the labor force) is determined by the answers to a number of related questions. However, if one or more of these questions is not completed but the majority are filled and consistent with each other, the status is determined on the basis of the available answers. This procedure accounts for an artificially low count of "NA's" for certain items.

APPENDIX D

SAMPLING VARIATION

As in any survey based upon a sample, the data in this report are subject to sampling error, that is, variation attributable solely to the fact that they emerge from a sample rather than from a complete count of the population. Because the probabilities of a given individual's appearing in the sample are known, it is possible to estimate the sampling error, at least roughly. For example, it is possible to specify a "confidence interval" for each absolute figure or percentage, that is, the range within which the true value of the figure is likely to fall. For this purpose, the standard error of the statistic is generally used. One standard error on either side of a given statistic provides the range of values which has a two-thirds probability of including the true value. This probability increases to about 95 percent if a range of two standard errors is used.

Standard Errors of Percentages

In the case of percentages, the size of the standard error depends not only on the magnitude of the percentage, but also on the size of the base on which the percentage is computed. Thus, the standard error of 80 percent may be only 1 percentage point when the base is the total number of white men, but as much as 8 or 9 percentage points when the base is the total number of unemployed white men. Two tables of standard errors, one for whites and one for blacks, are shown below (Tables D-1 and D-2).

The method of ascertaining the appropriate standard error of a percentage[1] may be illustrated by the following example. This sample represents approximately 1,300,000 white men aged 17 to 27 in 1969 who were out of school since 1966 and had completed fewer than twelve years of school. Our estimates indicate that 96 percent of these men were in the labor force at the time of the 1969 survey. Entering the table for white men (D-1) with the base of 1,000,000 and the percentage 95, one finds the standard error to be 1.9 percentage points. Thus, chances are two out of three that a complete enumeration would have resulted in a figure between 97.9 and 94.1 percent (96 ± 1.9) and 19 out of 20 that the figure would have been between 99.8 and 92.2 (96 ± 3.8).

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1 Because the sample is not random, the conventional formula for the standard error of a percentage cannot be used. The entries in the tables have been computed on the basis of a formula suggested by the Bureau of the Census statisticians. They should be interpreted as providing an indication of the order of magnitude of the standard error rather than a precise standard error for any specific item.

Table D-1 Standard Errors of Estimated Percentages of Whites
(68 chances out of 100)

Base of percentage (thousands)	Estimated percentage				
	1 or 99	5 or 95	10 or 90	20 or 80	50
100	2.8	6.0	8.3	11.1	13.9
200	1.9	4.2	5.8	7.8	9.7
350	1.5	3.2	4.4	5.9	7.3
500	1.2	2.7	3.7	4.9	6.1
1,000	0.9	1.9	2.6	3.5	4.3
5,000	0.4	0.8	1.2	1.5	1.9
14,046	0.2	0.5	0.7	0.9	1.2

Table D-2 Standard Errors of Estimated Percentages of Blacks
(68 chances out of 100)

Base of percentage (thousands)	Estimated percentage				
	1 or 99	5 or 95	10 or 90	20 or 80	50
25	3.3	7.3	10.0	13.3	16.7
50	2.3	5.1	7.1	9.4	11.8
100	1.6	3.6	5.0	6.6	8.3
200	1.2	2.5	3.5	4.7	5.8
750	0.6	1.3	1.8	2.4	3.0
1,400	0.4	1.0	1.3	1.8	2.2
2,041	0.4	0.8	1.1	1.5	1.8

Standard Errors of Differences between Percentages

In analyzing and interpreting the data, interest will perhaps most frequently center on the question whether observed differences in percentages are "real," or whether they result simply from sampling variation. If, for example, one finds on the basis of the survey that 3.3 percent of the whites, as compared with 7 percent of the blacks, are unable to work, the question arises whether this difference actually prevails in the population or whether it might have been produced by sampling variation. The answer to this question, expressed in terms of probabilities, depends on the standard error of the difference between the two percentages, which, in turn, is related to their magnitudes as well as to the size of the base of each. Although a precise answer to the question would require extended calculation, it is possible to construct charts that will indicate roughly, for different ranges of bases and different magnitudes of the percentages themselves, whether a given difference may be considered to be "significant," i.e., is sufficiently large that there is less than a 5 percent chance that it would have been produced by sampling variation alone. Such charts are shown below.

The magnitude of the quotient produced by dividing the difference between any two percentages by the standard error of the difference determines whether that difference is significant. Since the standard error of the difference depends only on the size of the percentages and their bases, for differences centered around a given percentage it is possible to derive a function which relates significant differences to the size of the bases of the percentages. If a difference around the given percentage is specified, the function then identifies those bases which will produce a standard error small enough for the given difference to be significant. The graphs which follow show functions of this type; each curve identifies combinations of bases that will make a given difference around a given percentage significant. For all combinations of bases on or to the northeast of a given curve, the given difference is the maximum difference necessary for significance.

Thus, to determine whether the difference between two percentages is significant, first locate the appropriate graph by selecting the one labeled with the percentage closest to the midpoint between the two percentages in question. When this percentage is under 50, the base of the larger percentage should be read on the horizontal axis of the chart and the base of the smaller percentage on the vertical axis. When the midpoint between the two percentages is greater than 50, the two axes are to be reversed. (When the midpoint is exactly 50 percent, either axis may be used for either base.) The two coordinates identify a point on the graph. The relation between this point and the curves indicates the order of magnitude required for a difference between the two percentages to be statistically significant at the 5 percent confidence level.

All this may be illustrated as follows. Suppose in the case of the whites the question is whether the difference between 27 percent (on a base of 6,000,000) and 33 percent (on a base of 5,000,000) is significant.[2] Since the percentages center on 30 percent, Figure 4 should be used. Entering the vertical axis of this graph with 6,000,000 and the horizontal axis with 5,000,000 provides a coordinate which lies to the northeast of the curve showing combinations of bases for which a difference of 5 percent is significant. Thus the 6 percentage point difference (between 27 and 33 percent) is significant.

As an example of testing for the significance of a difference between the two color groups, consider the following. The data in our study show that for young men 22 to 27 who had been out of school since 1966, 6.4 percent of the blacks (on a base of 495,000) and 1.8 percent of the whites (on a base of 3,106,000) were unemployed at the time of the 1969 survey. To determine whether this intercolor difference is statistically significant, Figure 1 is used because the midpoint (4.1 percent) is closest to 5.[3] Entering this graph at 495,000 on the vertical axis for blacks (calibrated on the right hand side of the figure) and at 3,106,000 on the horizontal axis for whites provides a coordinate which lies to the northeast of the 4 percent curve. Thus, the 4.6 percentage point difference in unemployment rates is significant.

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2 Each of the curves in the graphs of this appendix illustrates a functional relationship between bases expressed in terms of actual sample cases. For convenience, however, the axes of the graphs are labeled in terms of blown-up estimates which simply reflect numbers of sample cases multiplied by a weighting factor.

3 If both percentages are less (greater) than 50 and the midpoint between the two percentages is less (greater) than the percentage for which the curves were constructed, the actual differences necessary for significance will be slightly less than those shown on the curve. The required differences shown on the curves <u>understate</u> the actual differences necessary for significance when both percentages are less (greater) than 50 and the midpoint is greater (less) than the percentage for which the curves were constructed.

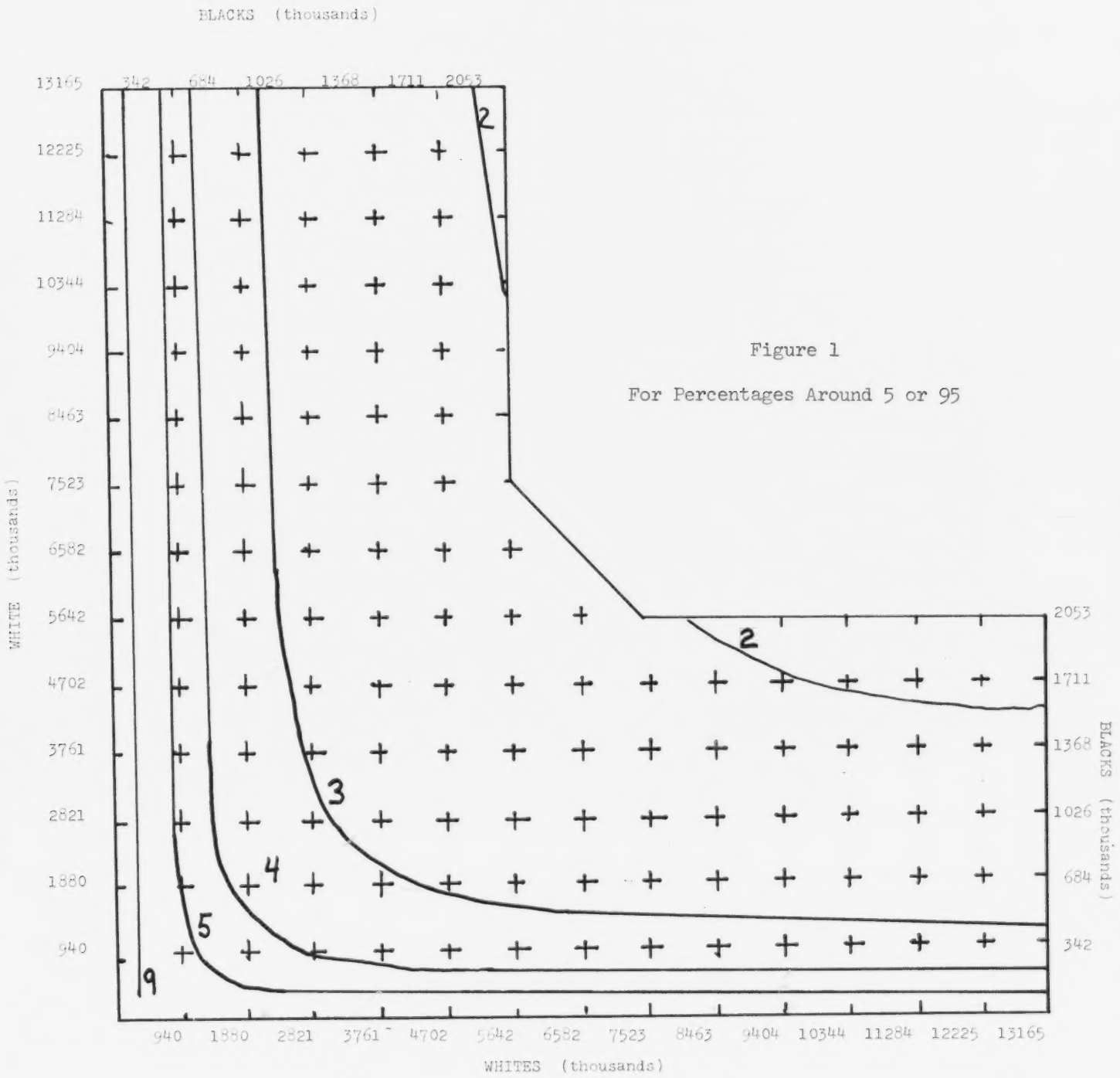

Figure 1

For Percentages Around 5 or 95

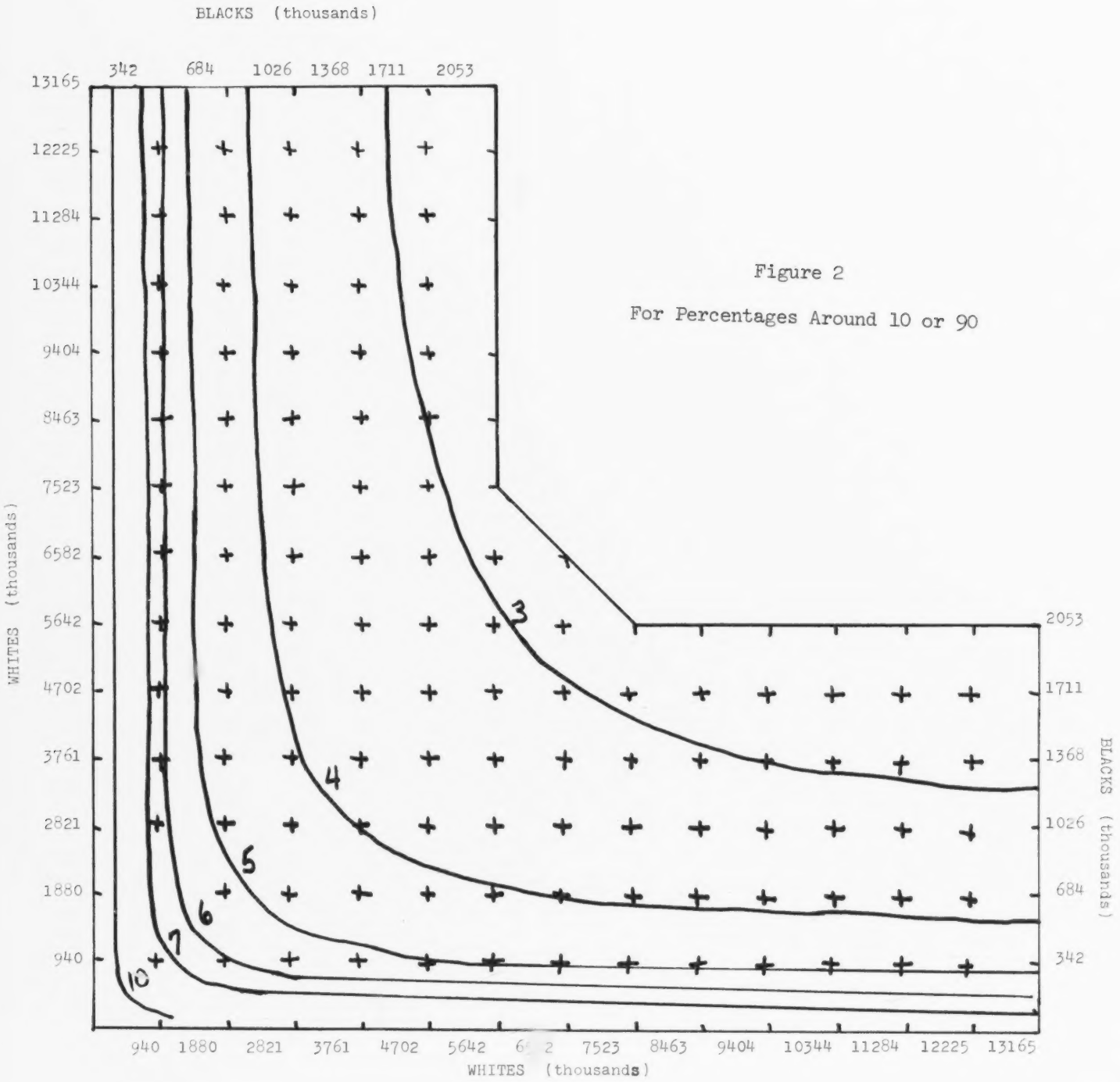

Figure 2

For Percentages Around 10 or 90

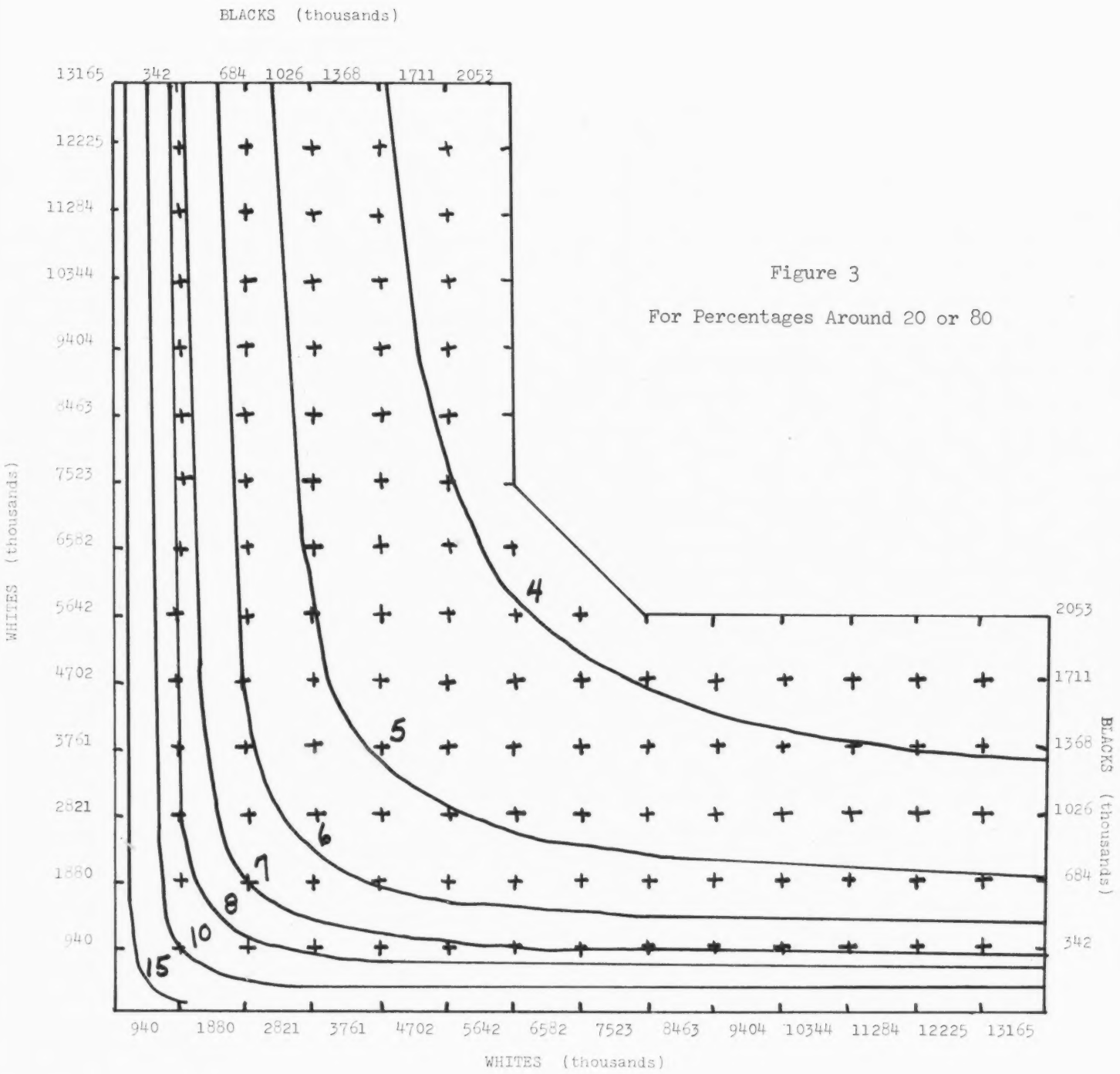

Figure 3

For Percentages Around 20 or 80

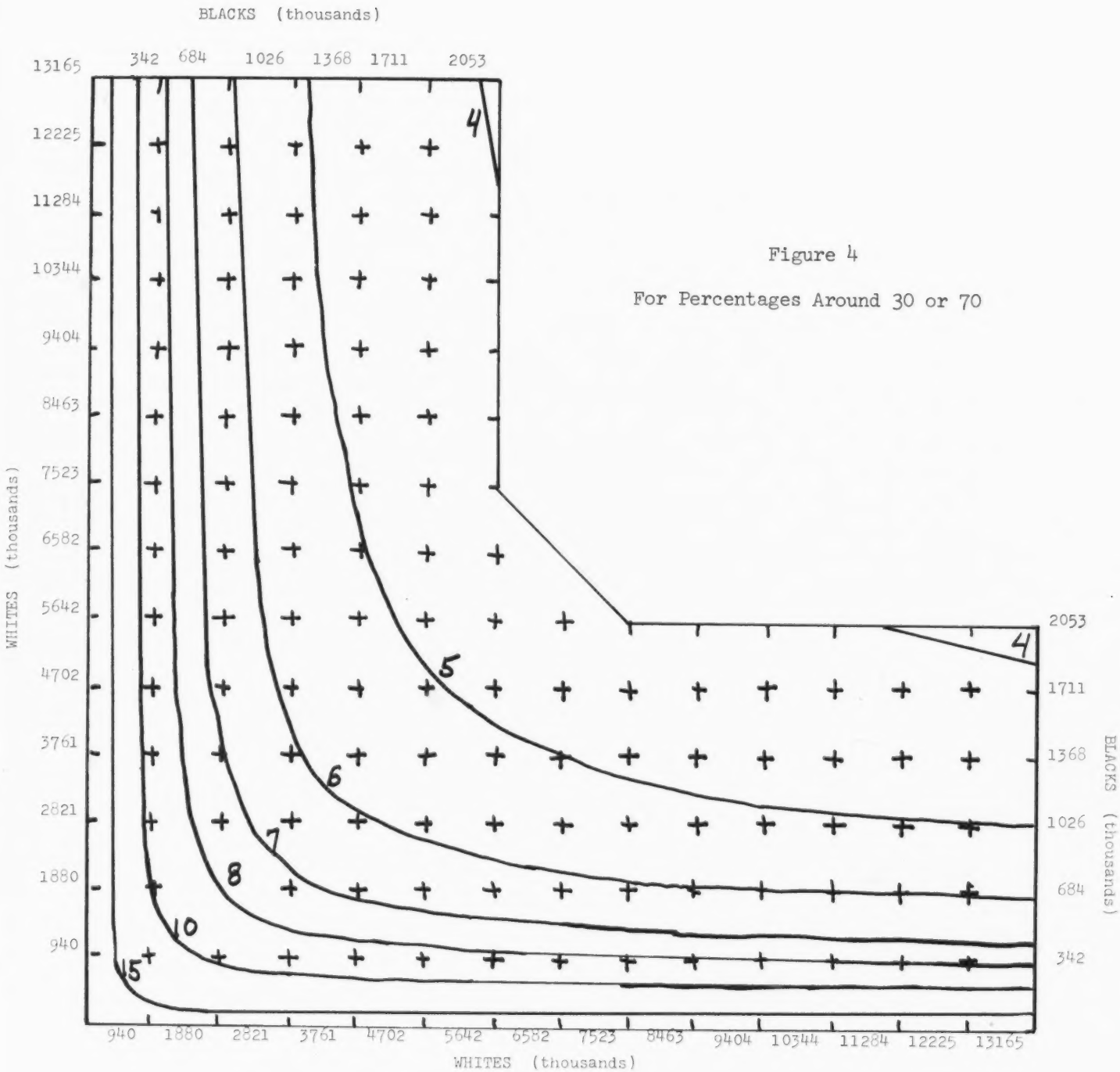

Figure 4

For Percentages Around 30 or 70

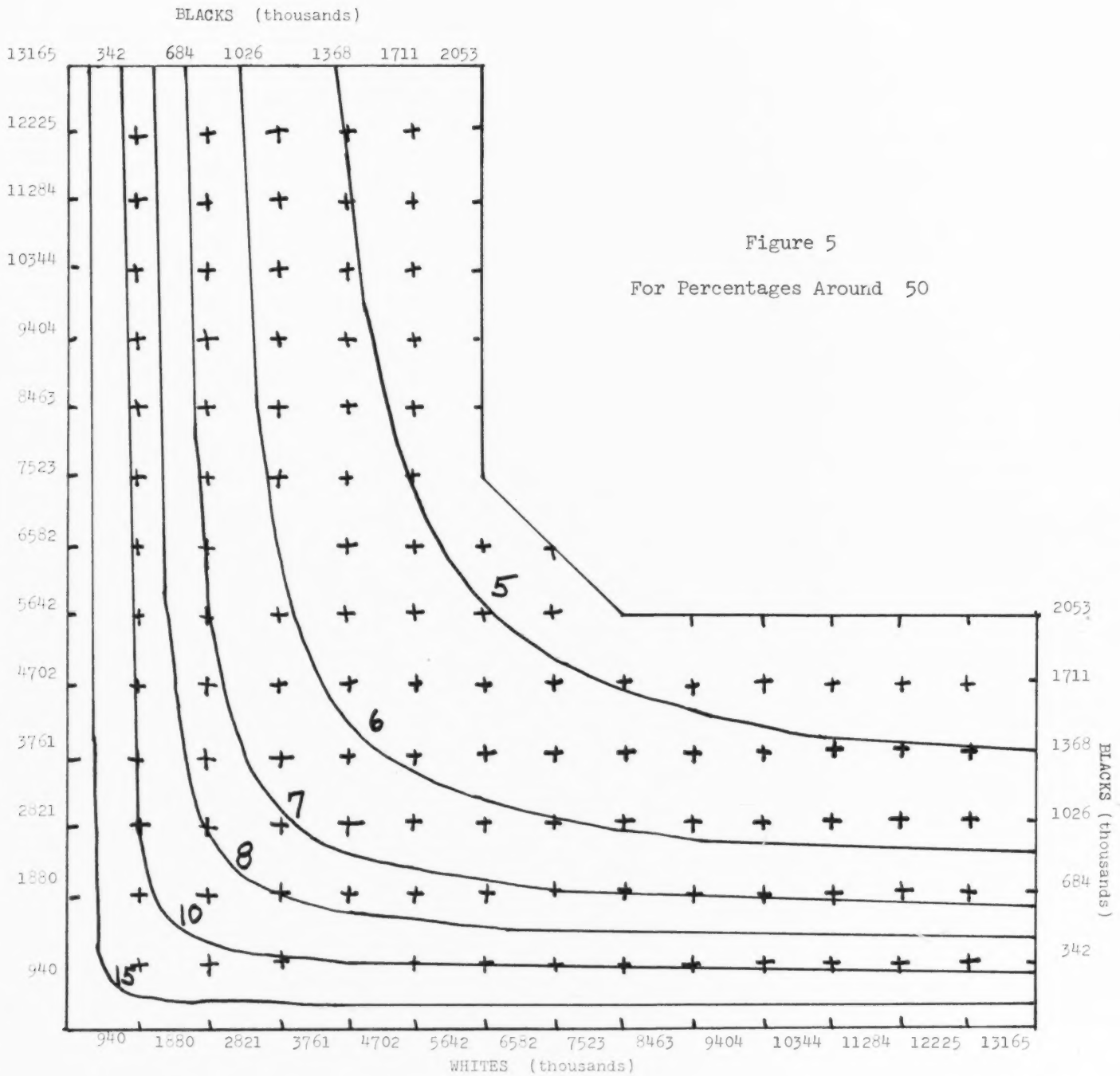

Figure 5

For Percentages Around 50

APPENDIX E*

ON THE POOLING OF MENTAL ABILITY MEASURES FROM DIFFERENT TESTS: A PRAGMATIC APPROACH

For some time there has existed within the psychometric literature a general skepticism regarding the usefulness of pooling measures of mental ability obtained from different tests. In particular, it is urged (if not insisted) that investigators seeking to measure mental ability administer the same test to all subjects under the same highly standardized conditions. Yet, there are many instances in large scale social research on geographically dispersed samples where such uniformity in data collection procedures is not possible. Under such circumstances should the investigator abandon his theoretical interest in mental ability, or should he proceed in a more pragmatic fashion?

Recently a unique opportunity arose for examining empirically the consequences of pooling data from a large number of different tests of mental ability. As one part of a National Longitudinal Survey of Young Men[1] the U. S. Bureau of the Census sent inquiries to 2,042 secondary schools[2] to obtain the most recent data regarding the mental ability of

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* This appendix was written by Robert E. Herriott and Andrew I. Kohen, while the former author was Director of the Center for the Study of Education, The Florida State University. This appendix has been reproduced as it originally appeared in the latter author's Ph.D. dissertation, "Determinants of Early Labor Market Success Among Young Men: Race, Ability, Quantity and Quality of Schooling" (The Ohio State University, 1972).

1 This group constitutes one of the four population samples comprising the National Longitudinal Studies (LGS) being carried out by The Ohio State University Center for Human Resource Research under a contract with the Manpower Administration of the U. S. Department of Labor.

2 Actually, the survey of secondary schools contained the 3,030 institutions attended by members of <u>two</u> samples of 14 to 24 year olds, i.e., males and females. However, members of the male sample attended only 2,042 of the schools; the remaining 988 schools were represented in the samples only by females. Many of the 2,042 schools had pupils in both sex cohorts. The school survey instrument appears in Appendix G.

males between the ages of 14 and 24 who either were currently attending that school or who had most recently attended it. Through extensive follow-ups involving both remailings and long-distance telephone calls, scores obtained from over 30 different tests of mental ability were received for 3,375 of the 4,007 males for whom scores were sought.[3] Presented below is a review of some of the psychometric issues underlying the equating of scores from different tests, as well as a description of procedures used to transform the available scores, and to assess their comparability. In addition some suggestions for improving the quality of this type of data are offered.

Psychometric Issues

In the psychometric literature an important distinction is made between tests of the same "function" and tests of different functions. Tests of the same function are said to be "parallel" and those of different functions "non-parallel." Although the definition of function is not always clear-cut, it is generally assumed that alternate forms of the same test by the same publisher are parallel. There is far less consensus regarding alternate tests by the same publisher, and even less regarding alternate tests from different publishers. If tests are parallel, the problem of equating scores is analogous to that of converting centimeters to inches or pounds to grams, i.e., a direct linear transformation of scale. If tests are non-parallel, the problem of conversion is viewed to be more analogous to a conversion from inches to pounds, i.e., a far more complex process involving controversial assumptions about the bivariate distribution of the two variables within particular populations.

In considering the conversion of scores from non-parallel tests Angoff has identified three important questions which must be considered by the investigator:[4]

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3 The LGS sample of male youth initially consisted of 5,225 respondents, but scores were sought only for the 4,007 young men who (1) had completed the ninth grade by the time of the survey and (2) had signed the waiver form permitting the Census Bureau to request their scores. Three-fourths of those for whom scores were not sought failed to meet the first criterion.

4 William H. Angoff, "Can Useful General-Purpose Equivalency Tables be Prepared for Different College Admission Test?" Proceedings: 1962 Invitational Conference on Testing Problems, ed. by Eric F. Gardner (Princeton: Educational Testing Service, 1963), pp. 57-73.

1. How similar are the tests for which comparable scores are to be developed?

2. How appropriate is the group on whom the table of comparable scores is based when one considers the person or the group for whom the table is to be used?

3. How much error can we safely tolerate in the particular use we have in mind?

Before designing our approach we considered each question carefully. The tests which produced the available scores were all tests of mental functioning, although they were identified by their publishers as tests of "mental ability," "intelligence," "mental maturity," "educational ability," etc. Since such tests as these are often used interchangeably by educators for guidance, selection, and placement purposes we assumed them to be "similar" in Angoff's terms.

The problem of developing a table of comparable scores for different tests requires a procedure which takes into account not only their differing means and standard deviations but also their differing reliabilities and inter-correlations. To develop a meaningful table of comparable scores, data for the same subjects on all pairs of tests for a series of relevant subpopulations (stratified on such important variables as age, sex, and race) are required. Lacking such data we had to make the assumption that the many tests were equally reliable and perfectly correlated and directed our attention solely to the matter of correcting for different means and standard deviations. As is noted below, in spite of its "erroneous" nature this assumption did not prove particularly troublesome.

The issue of tolerable error clearly is different in the case of large-scale social research than in the typical psychometric case. In the typical case the purpose of the conversion is to enable a practitioner (e.g., a college admission officer) to make a decision regarding an individual case (e.g., whether or not an applicant should be admitted to a particular college). In such cases the tolerance for error is necessarily quite small, for the consequences of error for the applicant (although not necessarily for the college) can be rather severe. In social research the investigator typically is interested in the estimation of measures of central tendency for groups or in assessing analytic relationships among variables, and in general such estimates would be far less affected by errors in the conversion process than would individual scores. Therefore, although we assumed the proposed conversion procedures to contain tolerable error, we designed an analysis to assess the reasonableness of this assumption.

Conversion Procedures

The scores reported by the educational officials were in a variety of forms. In some instances they were traditional IQ scores, in other cases standard scores, and in still other cases they were reported as percentile scores, percentile bands or stanines. In order to transform all scores to a common metric, information was solicited from the various test publishers regarding the means and standard deviations of the tests reported to the Census Bureau.

As reported by the test publishers the largest number of available scores was based upon a distribution with a mean of 100 and a standard deviation of 16. Therefore, it was decided to use that scale as the common metric. Accordingly, all scores reported in standard score form based upon a different metric were converted to z-score equivalents and then to the common metric. Scores reported in percentile form were also converted to z-scores and then to the common metric. If percentile bands were reported they were "centered" and then converted as in the case of the percentile. Scores reported as stanines were also centered and converted directly.

In order to consider the utility of estimating mental ability from grade point averages in 190 instances where no mental ability score of any type was reported but a grade-point-average (GPA) was, a rough correspondence for that school between mental ability and GPA was estimated from the available data, and a mental ability score on the common scale was computed. In all cases the name of the test, and the method of conversion were noted for later consideration.

Assessment of Comparability

To assess the comparability of the scores derived from the various tests and equated using the procedures described above a series of analyses were carried out similar to those intended for the larger study in which the scores were to be used. Three variables known from previous research to predict mental ability were selected as predictors: father's occupation, father's education, and mother's education. Each of these socioeconomic measures had been developed from responses obtained earlier in the data collection process by the Census Bureau through a standardized interview with each male in the study sample. Thus, they could be considered highly standardized across individuals.

Of the 3,375 individuals for whom test scores were available, only 2,429 were used in the analysis discussed below. The other 946 cases could not be used because information on one or more of the predictors was lacking. The data which are available suggest that relative to the included group, the excluded group somewhat overrepresents youth from disadvantaged socioeconomic backgrounds. For example, the mean number of years of schooling completed by the fathers of those in the

excluded group is 9.6, as compared to 10.6 for those included.[5] Thus, it is not surprising that the mean mental ability score of the excluded group is lower than that of the included group, i.e., 96.7 versus 103.4. The consistent direction of these differences supports our belief that excluding the 946 cases did not produce any important distortion in our results.

In designing the analysis seven data groups were constructed from among the individuals whose mental ability scores were available through the conversion process. A score from the Otis Quick Scoring Mental Ability Test was reported for approximately 25 percent of the data cases and so those 635 subjects with scores on that test were treated as a single test group. Similarly, the 443 subjects whose scores were based upon the California Test of Mental Maturity were treated as a distinct group. Since both the Lorge-Thorndike Intelligence Test and the Henmon-Nelson Test of Mental Maturity are administered by the same publisher, and since the number of subjects was relatively small in each case, these two tests were pooled into a single test group for purposes of the analysis. Subjects with scores originally from the PSAT, SAT, and SCAT tests published by the Educational Testing Service were also pooled for similar reasons.

No single test or test publisher was common to more than 20 percent of the remaining 601 subjects and so further, but less precise, pooling was conducted to obtain a fifth and sixth data group. In addition, the scores estimated from GPAs were retained as a seventh data group in order that they be treated separately. The number of cases within each of the seven data groups ranged from 635 in the case of those subjects whose scores were based upon the Otis test to the 190 cases whose scores had been estimated from the reported GPA.

Table E-1 presents the means and standard deviations for the mental ability scores and the three predictor variables within each of the seven test groups as well as within the total sample. There it can be noted in particular that different test groups have somewhat different means on the common measure of mental ability. However, given the similar variation among the groups in the means for the three predictor variables these differences in mean measured mental ability would seem to suggest variation in the socioeconomic characteristics of the subpopulations who are administered the various tests, rather than errors in the conversion process. Presented in Table E-2 are the zero-order correlations between each of the three predictor variables and the mental ability scores and between all

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5 The mean years of father's education for the excluded group is based on 358 cases.

Table E-1 Means and Standard Deviations by Test Group: Variables Used in Assessing the Procedure of Pooling Mental Ability Scores From Different Tests

Test group[a]	N	X_1[b]		X_2[c]		X_3[d]		X_4[e]	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	635	36.7	23.0	10.7	3.3	11.0	2.7	104.8	14.2
2	443	34.4	23.1	10.3	3.7	10.7	2.9	102.4	14.6
3	271	36.6	22.2	10.8	3.1	11.2	2.6	104.2	13.8
4	289	40.7	22.8	11.5	3.2	11.7	2.6	108.1	14.9
5	379	34.9	22.8	10.2	3.4	10.8	2.9	102.6	16.3
6	190	34.9	24.2	9.9	3.9	10.0	3.2	96.1	14.3
7	222	36.5	23.7	10.6	3.5	11.3	2.8	102.0	16.7
Total	2,429	36.3	23.1	10.6	3.5	11.0	2.8	103.4	15.1

a Group 1: Otis Quick Scoring Test of Mental Ability
Group 2: California Test of Mental Maturity
Group 3: Lorge-Thorndike Intelligence Test
Henmon-Nelson Test of Mental Ability
Group 4: Preliminary Scholastic Aptitude Test
Scholastic Aptitude Test
School and College Ability Test
Group 5: Miscellaneous additional tests
Group 6: Ability scores estimated from GPA reports
Group 7: Test of Educational Ability
Primary Mental Ability Test
Iowa Test of Educational Development
Differential Aptitude Test
American College Testing Program
National Merit Scholarship Qualifying Test

b Father's occupation when the respondent was 14 years of age, measured in terms of the Duncan index of occupational status.

c Number of years of formal schooling completed by respondent's father.

d Number of years of formal schooling completed by respondent's mother.

e Mental ability score.

Table E-2 Zero-Order Correlation Coefficients, by Test Group: Variables Used in Assessing the Procedure of Pooling Mental Ability Scores From Different Tests

Coefficient[b]	Test Group[a]							Total sample
	1	2	3	4	5	6	7	
r_{14}	.30	.34	.32	.36	.29	.32	.24	.31
r_{24}	.32	.39	.35	.32	.42	.30	.34	.36
r_{34}	.27	.36	.36	.27	.40	.22	.27	.33
r_{12}	.57	.53	.57	.50	.55	.58	.55	.55
r_{13}	.41	.40	.37	.37	.40	.34	.43	.40
r_{23}	.56	.58	.50	.64	.63	.60	.62	.59

a See note a, Table E-1.

b X_1 = Father's occupation

X_2 = Father's education

X_3 = Mother's education

X_4 = Mental ability

pairs of the predictor variables. In the case of father's occupation as a predictor of mental ability (r_{14}), the coefficients vary between .24 and .36, but such a range is certainly within the limits of that between father's occupation and the other two predictors where all measures are standard across the seven test groups. Similarly the coefficients for father's education and mental ability vary between .30 and .42 and those for mother's education and mental ability between .22 and .40, but again their range does not seem excessive in comparison with that noted between pairs of the three predictors.

In order to conduct a systematic test of the variations between the different test groups, a series of multiple regression analyses were conducted. Table E-3 presents the resulting coefficients and their levels of statistical significance. Table E-4 contains statistics to test the significance of all paired differences between the same coefficients based upon analyses within different test groups. The statistics in Table E-4 were derived from a series of regression equations in which the regressors included dummy variables for the relevant strata (tests) and products of each of those dummy variables with the continuous predictor variables. Thus, for example, an equation to test for differences between the coefficients in stratum 1 and stratum 2 would take the following form:

$$(1)\quad X_4 = a_0 + a_1X_1 + a_2X_2 + a_3X_3 + a_4D + a_5(DX_1) + a_6(DX_2) + a_7(DX_3) + u,$$

where D = 1 for observations in stratum 2, and

= 0 otherwise.

The six regressions of this type which were performed were much more elaborate because they were designed to test for differences among all of the strata. Thus, the general form of equation (1) was as follows:

$$(2)\quad X_4 = a_{k0} + a_{k1}X_1 + a_{k2}X_2 + a_{k3}X_3 + \sum_{i\neq k}^{7} a_iD_i + \sum_{i\neq k}^{7}\sum_{j=1}^{3} a_{ij}(D_iX_{ij}) + u,$$

where the kth stratum is the reference stratum to whose coefficients the coefficients of the other six strata were compared.[6]

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6 See also Damodar Gujarati, "Use of Dummy Variables in Testing for Equality between Sets of Coefficients in Linear Regressions: A Generalization," The American Statistician, 24 (December 1970), pp. 18-22.

Table E-3 Coefficients For Third-Order Regression of Mental Ability On Father's Occupation, Father's Education and Mother's Education, by Test Group

Test group[a]	Number of cases	Intercept	Father's occupation	Father's education	Mother's education	R^2 (adj.)	F-ratio
1	635	86.92*	+.098*	+ .703*	+ .618*	.13	32.27*
2	443	81.90*	+.105*	+ .760*	+ .909*	.19	36.02*
3	271	80.26*	+.092*	+ .625*	+1.238*	.17	19.96*
4	289	88.48*	+.173*	+ .618	+ .476	.15	18.02*
5	379	75.46*	+.049*	+1.176*	+1.247*	.21	33.53*
6	190	83.75*	+.125*	+ .523	+ .286	.11	8.76*
7	222	81.96*	+.047	+1.183*	+ .516	.11	10.44*
Total sample	2,429	81.80*	+.097*	+ .818*	+ .863	.19	21.42*

a See Table E-1 for identification of test groups.
* Significant at .05 level or below.

Table E-4 T-Ratios For Inter-Group Comparison of Third-Order Regressions of Mental Ability on Father's Occupation, Father's Education, and Mother's Education, by Test Group

	Test Group[a]					
	2	3	4	5	6	7
Test group 1[a]						
Intercept	1.66	1.46	- .35	3.11*	.77	1.09
Father's occupation	- .14	.12	-1.48	1.04	- .46	.94
Father's education	- .17	.19	.20	-1.28	.42	-1.13
Mother's education	- .79	-1.41	.30	-1.58	.72	.21
Test group 2						
Intercept		.18	-1.61	1.49	- .63	- .19
Father's occupation		.23	-1.28	1.10	- .34	1.01
Father's education		.32	.33	1.10	.54	- .98
Mother's education		- .72	.88	- .81	1.31	.78
Test group 3						
Intercept			-1.51	1.00	- .68	- .31
Father's occupation			1.31	.72	- .49	.69
Father's education			.02	-1.20	.20	-1.11
Mother's education			1.39	- .02	1.79	1.29
Test group 4						
Intercept				2.76*	.93	1.20
Father's occupation				2.24*	.73	2.03*
Father's education				-1.21	.19	-1.18
Mother's education				-1.49	.33	- .07
Test group 5						
Intercept					-1.90	-1.36
Father's occupation					-1.22	.05
Father's education					1.38	.02
Mother's education					1.93	1.39
Test group 6						
Intercept						.35
Father's occupation						1.14
Father's education						-1.28
Mother's education						- .40

a See Table E-1 for identification of test groups.
* Significant at .05 level.

In general there is very little evidence which suggests that the intercepts or regression coefficients resulting from the analyses within the different test groups are from different populations. Of the 84 coefficients presented in Table E-4 (21 pairs of test group comparisons for 4 parameters) only four are statistically significant at the .05 level, and in no case does the comparison between any two data groups produce more than 2 coefficients whose difference is statistically significant. Further, two of the four significant differences are with respect to the intercept, which given the somewhat different group means on the three predictors suggests more a difference among the subpopulations administered the different tests than among the internal properties of the test scores themselves.

The comparison between Group One (Otis test) and Group Two (California test) is particularly interesting for these groups represent the two most frequently reported tests for this national sample. Neither the intercepts for these two tests nor any of the regression coefficients differ significantly. In considering the comparison between Group Three (Houghton-Mifflin tests) with Group Four (Educational Testing Service tests), the same negative findings can be observed. The case in which two significantly different coefficients occurs is that between Group Four (Educational Testing Service tests) and Group Five (a potpourri of little known and often only locally used tests). Given the rather different nature of these two test groups on the three socioeconomic indicators (see Table E-1) it does not seem unreasonable that even on a common test of mental ability the Group Four intercept would be in excess of that for Group Five, or that the regression coefficient for father's occupation would also vary.

The four statistically significant pair-wise differences are depicted graphically in Figures E-1 and E-2. Each curve on the graph represents a normal density (frequency) function defined by the value of a regression coefficient and its standard error. In addition, each curve is traced out with the numeral of the stratum to which it applies. The amount of common area under any two curves indicates the level of confidence which we have in accepting the hypothesis that the effect of a variable on mental ability is the same for both strata.

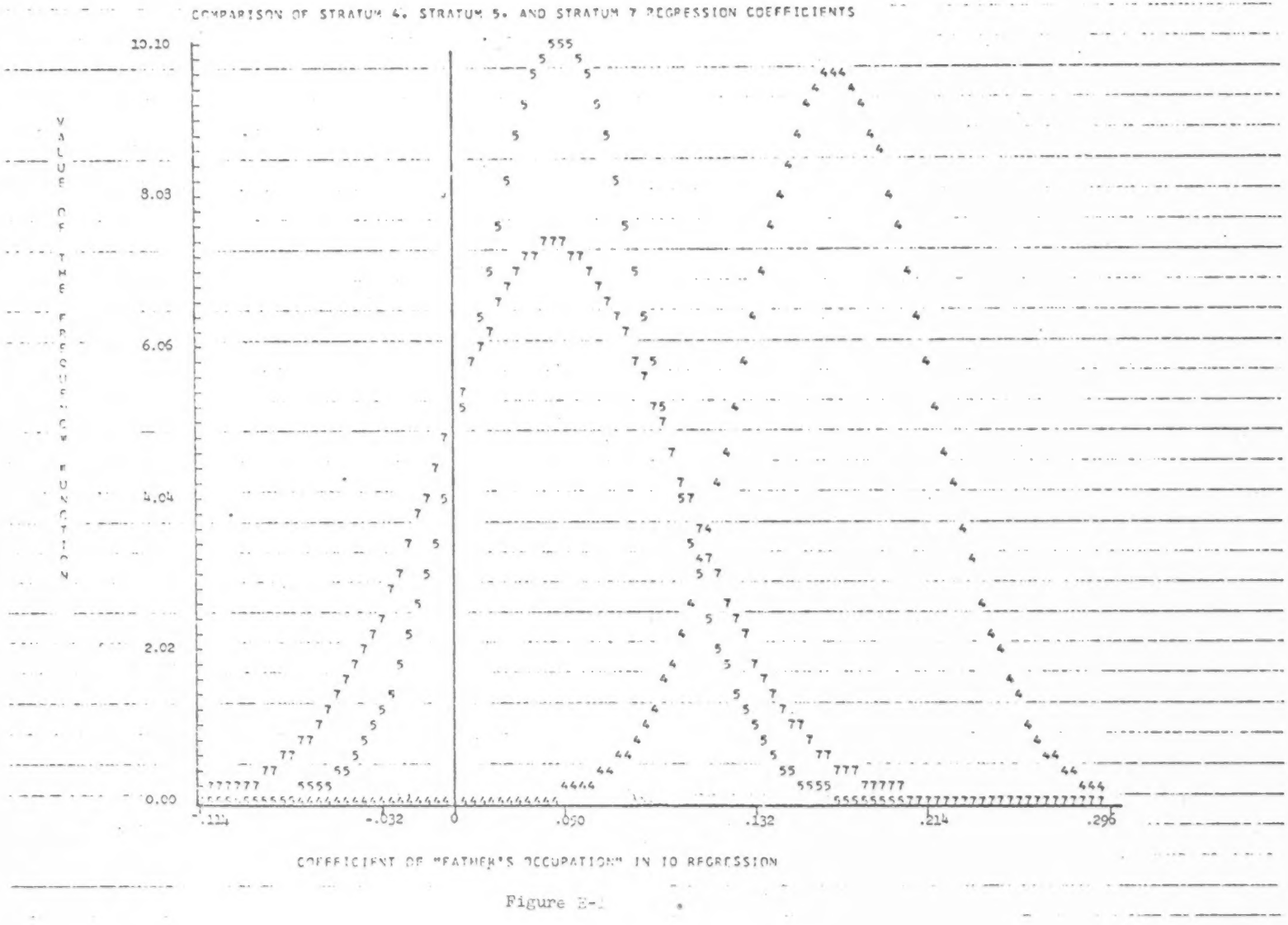
COMPARISON OF STRATUM 4, STRATUM 5, AND STRATUM 7 REGRESSION COEFFICIENTS
10.10
8.08
6.06
4.04
2.02
0.00
VALUE OF THE RESPONSE FUNCTION
-.114
-.032
0
.050
.132
.214
.296
COEFFICIENT OF "FATHER'S OCCUPATION" IN IQ REGRESSION

Figure B-1

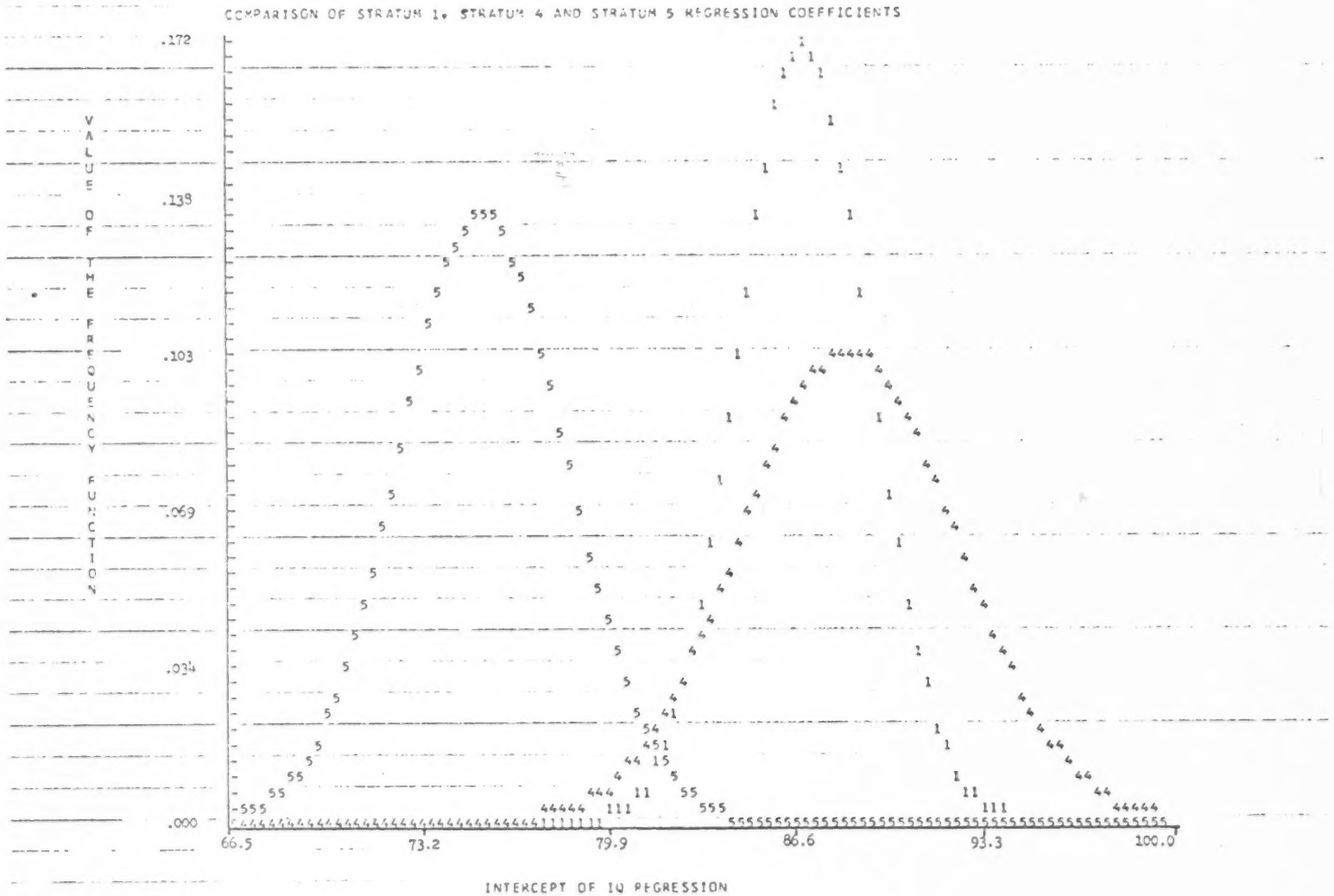
COMPARISON OF STRATUM 1, STRATUM 4 AND STRATUM 5 REGRESSION COEFFICIENTS
.172
.138
.103
.069
.034
.000
VALUE OF THE FREQUENCY FUNCTION
66.5
73.2
79.9
86.6
93.3
100.0
INTERCEPT OF IQ REGRESSION

Figure E-2

Thus, Figure E-1 clearly indicates why the hypothesis of equality of the effect of father's occupation is rejected in the comparison between stratum 4 and stratum 5, and in that between 4 and 7. The large common area under the curves for strata 5 and 7 similarly indicates why the hypothesis is accepted in this instance.[7] Analogous inferences can be drawn from the pair-wise comparisons of intercepts among strata 1, 4, and 5 as illustrated in Figure E-2.

Allowing for differences among the data groups in sample size, it would seem that regardless of the particular mental ability test from which a common score was obtained, the relationship (as measured by the regression coefficients) between socioeconomic status and mental ability is remarkably similar. Although certain coefficients are significant within some data groups and not within others, the joint effect of the three predictor variables as measured by R^2 adjusted for degrees of freedom is significant in all cases (Table E-3). Particularly important is the fact that both the zero-order and third-order coefficients for the pooled sample appear well within the limits reported in past research using a single test of mental ability.

Implications

On the basis of these results we see little reason for social scientists engaged in analytic research on national samples of youths or young adults to be reluctant to pool data from different commonly used tests of mental ability after first correcting for their varying means and standard deviations. Certainly the error introduced by such a procedure for "equating" non-parallel tests seems small in comparison with the value of having a measure of mental ability available for analysis.

However, in addition to the procedures utilized in the present study it seems desirable to attempt to make a greater provision in the equating process than was possible in the present study for possible varying inter-correlations between pairs of the different tests. Therefore, we suggest that instead of asking for data on only the most recent test, as was done in the study upon which our analysis was based, future investigators obtain data on as many of the seven most frequently used tests of mental ability as are available within a

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7 The location of the zero point on the horizontal axis in this graph indicates why the coefficients of father's occupation in strata 5 and 7 were judged to be insignificantly different from zero (see Table E-3). It is clear that the area to the right of the zero line comprises much less than 95 percent of the area under the curve in each case.

school's records. Not only will this minimize the number of different tests whose scores must be transformed to a common metric, but it will also permit the estimation of inter-test correlations which can be introduced as weights into the conversion process.

In some instances the school may not have available a score from one of the seven tests, but may have a score from some other test. To maximize response, it seems advisable to ask for such a score as well. However, since such a score will have to be handled with special care, at the time of data processing a decision will have to be made regarding whether or not, given the frequency of such occurrences, the objectives of the survey warrant the additional cost of manually coding and transforming such scores to the common metric.

A suggested format which accomplishes these objectives is presented in Figure E-3. In addition, in order to assure the release of test information by school officials it is recommended that written permission for access to these data be obtained from the subject prior to the time of inquiry and forwarded to the school at the time the request for test data is made.

It is our estimate that with a format of the type proposed in Figure E-3 and with statements for the release of the data, machine transformable test scores can be obtained for at least 90 percent of a national sample of subjects still enrolled in school. For subjects not enrolled in school the percentage would of course be less, but in the urban areas school officials seem to be able to retrieve test data for persons up to 24 years of age. With the increased use of automated storage and retrieval systems by other school systems, increasingly such data should be accessible for additional subjects.

Figure E-3 Proposed Format for Obtaining Individual Mental Ability Scores From School Records

_____
(Name of Individual)

1. Do you have a record of any group administered SCHOLASTIC APTITUDE or INTELLIGENCE test score OR national percentile for this person?

   1 ☐ Yes -- continue with questions 1a & 1b

   X ☐ No -- skip to question 2

   1a. For EACH of the following tests please record the most recent test scores and national percentiles for this person. (If for any tests either the score or the percentile is unknown please write "NA" (i.e., not available) in the appropriate space.)

Name of Test	IQ Score	National Percentile
(01) California Test of Mental Maturity (CTMM)	____	____%ile
(02) Otis Quick Scoring Mental Ability Test	____	____%ile
(03) Lorge-Thorndike Intelligence Test	____	____%ile
(04) Henmon-Nelson Test of Mental Maturity	____	____%ile
(05) Kuhlmann-Anderson Intelligence Test	____	____%ile
(06) Differential Aptitude Test (DAT)	____	____%ile
(07) School and College Ability Test (SCAT)	XXXXX	____%ile

   1b. If this person has not taken any of the above seven tests but has taken some other aptitude or intelligence test, please give the name of the most recent test and the appropriate scores.

Name of Test	IQ Score	National Percentile
_____	____	____%ile

APPENDIX F

ABBREVIATED ROTTER I-E SCALE

The 11-item abbreviated version of Rotter's internal-external locus of control scale used in this study was first administered in the 1969 interview, and was administered again in the 1971 survey.[1] The abbreviated scale was constructed by including only those items of the 23-item Rotter scale which appeared to be more general, adult-oriented, and work related. Since the omission of 12 items from the original Rotter test implied an approximate halving of the possible range of scores (from 23-46 to 11-22), the format of the 11 items selected was elaborated to avoid such a shrinkage. The modification consisted of obtaining from the respondent his opinion as to how closely his force-choice response on each item represented his own view on the issue. ("Is this statement much closer or slightly closer to your opinion?" See item 31 in the interview schedule, Appendix G.) Thus, four scores are possible for each of the 11 items in the scale, instead of just two as in the original Rotter format:

"1" for internal response "much closer"
"2" for internal response "slightly closer"
"3" for external response "slightly closer"
"4" for external response "much closer"

The total score is then obtained by summing the values of all 11 items, with the range of scores consequently being 11 to 44. Individuals within each color group who scored below the median for that color group are designated as "internals" and those above the median as "externals."[2]

The abbreviated scale was pretested along with the original Rotter scale on 56 students at the Columbus Area Technical School, Columbus, Ohio. The purpose of the pretest was to determine the equivalence of the measure of locus of control produced by the 11-item scale and the

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1 For a definition of the concept of locus of control, see footnote 15, p. 48 of Chapter 2.

2 We are grateful to Professor Thomas M. Ostrom of the Department of Psychology, The Ohio State University, for his advice in developing the abbreviated scale and in devising the scoring procedure.

complete 23-item Rotter scale. It was decided that the abbreviated version would be an acceptable substitute for the complete test if two conditions were met. First, the correlation between the abbreviated-and complete-version scores was required to be comparable with either the test-retest correlation coefficient or the split-half correlation coefficient obtained by Rotter in the pretests of his scale. A correlation coefficient of .7 was selected as representative of the test-retest and split-half correlations obtained by Rotter.[3] Second, the abbreviated version was required to be internally consistent, to be demonstrated by an item analysis of the scale.

The data acquired through the pretest revealed a near equivalence of the abbreviated scale to the complete version. The correlation between the two versions was found to be .69, and the coefficient between the complete test and the unelaborated 11-item scale was .71. The item analysis of the abbreviated scale was conducted by correlating the score on each item with the score on the test, and all of the item correlations were found to be positive yet none was extremely large. On the basis of these findings, it was concluded that the measure of locus of control produced by the 11-item scale was nearly equivalent to the measure yielded by the complete Rotter scale.[4]

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3 Julian B. Rotter, "Generalized Expectancies for Internal versus External Control of Reinforcement," Psychological Monographs 80, no. 609 (1966).

4 For a more complete description of the Rotter scale instrument, the abbreviated version, and the pretest, see Gopal K. Valecha, "Construct Validation of Internal-External Locus of Control as Measured by An Abbreviated 11-Item I-E Scale," (Ph.D. dissertation, The Ohio State University, 1972).

APPENDIX F

1968 SCHOOL SURVEY QUESTIONNAIRE

1969 INTERVIEW SCHEDULE

Budget Bureau No. 41-S68054; Approval Expires December 31, 1968

FORM LGT-2(S)
(6-17-68)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

SURVEY OF WORK EXPERIENCE OF YOUNG MEN AND WOMEN
School Survey

NOTICE – Your report to the Census Bureau is confidential by law (Title 13 U.S. Code). It may be seen only by sworn Census employees and may be used only for statistical purposes.

Dear Sir:

The Bureau of the Census is conducting a survey for the Manpower Administration of the U.S. Department of Labor on the labor force behavior of a national sample of young men and women between the ages of 14 and 24.

The purpose of the survey is to obtain information about young people who have recently entered the labor force or who are planning to begin working soon – their education and training, their work experience, their future educational and professional plans. As an important part of this study, information is needed about the academic performance of the respondents of this survey, as well as about the programs and facilities of the high schools they have attended.

Some of the respondents of the survey have attended your school. These respondents, or their parents in the case of minor children, have provided us with signed forms, which are enclosed, authorizing your school to provide this information to the Bureau of the Census. Each student's name and the year he attended your school is shown in the column heading for questions 11–14 of the enclosed questionnaire. We would appreciate your completing this questionnaire, providing the requested information about the school and the designated students. The data you provide will be used, in conjunction with the information supplied earlier by the individual respondents, to develop programs to help counsel young men and women on education and job opportunities and to predict future employment patterns.

All information provided to the Bureau of the Census must be held in strict confidence and only statistical summaries will be published. No student, school or school district will be identifiable from any reports issued as a result of this study.

In answering questions where the answer may vary from year to year, such as the number of students enrolled, please use June 1968 as the reference date.

We recognize that it may be difficult to provide exact answers to all of the questions. For such cases, please give us your best estimate. If the information is not available and you feel a reasonable estimate cannot be made, please write "Don't know" in the answer space.

Please complete and return the questionnaire within five days in the enclosed envelope, which requires no postage.

Your cooperation in this survey will be greatly appreciated.

Sincerely yours,

A. Ross Eckler

A. Ross Eckler
Director
Bureau of the Census

Enclosures

1. What type of school is this?

1 ☐ General high school
2 ☐ Vocational high school
3 ☐ Junior high school
4 ☐ Other – *Specify*

_____

2. Is this a public, parochial, or private school?

1 ☐ Public
2 ☐ Parochial or church related
3 ☐ Other private

3. Which of the following grades does this school include?

(Circle the lowest and highest grades)

K 1 2 3 4 5 6 7 8 9 10 11 12

4. What is the total enrollment of this school by grade?

Grade	Enrollment
K	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

5a. How many books are in the school library?

Volumes _____ – *Skip to 6*

x ☐ No school library – *Answer 5b*

b. Do the students at this school have regular access to another library?

1 ☐ No – *Skip to 6*
2 ☐ Yes – **What kind?** – *Specify then answer 5c*

_____

c. About how many books are in that library?

Volumes _____

6. How many full-time teachers are on the staff?

Teachers _____

7. What is the annual contract salary for inexperienced teachers with a bachelor's degree? (For parochial or church related schools, please provide the annual contract salary for inexperienced LAY teachers with a bachelor's degree.)

$ _____

8. What is the current annual expenditure per pupil in average daily attendance for the school system?

$ _____

9. In general how much time outside school hours is a pupil in grades 9–12 expected to spend on school work per school day?

1 ☐ None or almost none
2 ☐ About ½ hour a day
3 ☐ About 1 hour a day
4 ☐ About 1½ hours a day
5 ☐ About 2 hours a day
6 ☐ About 3 hours a day
7 ☐ 4 hours or more a day

10a. Does this school have a vocational guidance program in which one or more persons are officially assigned, either full- or part-time (at least ¼ of total week), to work with individual students?

x ☐ No – *Skip to 11*
1 ☐ Yes – *Answer 10b-e*

b. How many persons are assigned FULL-TIME to this school's guidance program?

Number of full-time counselors _____

c. How many persons are assigned PART-TIME (at least ¼ of total work week) to this school's guidance program?

Number of part-time counselors _____

d. In what academic year did your school inaugurate a guidance program involving at least one part-time (at least ¼ of total week) or full-time counselor?

1 ☐ 1960–61 or earlier
2 ☐ 1961–62
3 ☐ 1962–63
4 ☐ 1963–64
5 ☐ 1964–65
6 ☐ 1965–66
7 ☐ 1966–67 or later

e. Under which of the following conditions are counseling interviews held with individual students? *(Mark all that apply)*

1 ☐ At student's request
2 ☐ At teacher's request
3 ☐ At parent's request
4 ☐ At counselor's direction
5 ☐ Periodically with all students
6 ☐ Other – *Specify*

_____

_____

Census use only	Control No.			
Please complete questions 11–14 below for each student whose name appears to the right.		(1) Name – *Last, first*	(2) Name – *Last, first*	(3) Name – *Last, first*
		Sex M F / Year attended	Sex M F / Year attended	Sex M F / Year attended
11a. What is this student's score based on the most recent group scholastic aptitude or intelligence test he has taken?		11a. I.Q. or other score _____ If other, specify type_____ x ☐ Has not taken test–*Skip to 12*	11a. I.Q. or other score _____ If other, specify type_____ x ☐ Has not taken test–*Skip to 12*	11a. I.Q. or other score _____ If other, specify type_____ x ☐ Has not taken test–*Skip to 12*
b. What is the full name of the most recent group scholastic aptitude or intelligence test he has taken?		b.	b.	b.
c. What level was it?		c.	c.	c.
d. What form was it?		d.	d.	d.
e. In what grade or year of school was this pupil at the time this test was administered? *(Mark only one for each student)*		e. 1 ☐ Before 9th grade; 2 ☐ First year of high school (9th grade); 3 ☐ Second year of high school (10th grade); 4 ☐ Third year of high school (11th grade); 5 ☐ Fourth year of high school (12th grade)	e. 1 ☐ Before 9th grade; 2 ☐ First year of high school (9th grade); 3 ☐ Second year of high school (10th grade); 4 ☐ Third year of high school (11th grade); 5 ☐ Fourth year of high school (12th grade)	e. 1 ☐ Before 9th grade; 2 ☐ First year of high school (9th grade); 3 ☐ Second year of high school (10th grade); 4 ☐ Third year of high school (11th grade); 5 ☐ Fourth year of high school (12th grade)
12. What is (was) this student's grade point average (or equivalent) for his senior year?		12. Point average _____ x ☐ Has not completed senior year	12. Point average _____ x ☐ Has not completed senior year	12. Point average _____ x ☐ Has not completed senior year
13. How many days was this student absent from school during the past year (or last year he attended this school)?		13. Days absent _____	13. Days absent _____	13. Days absent _____
14. Do your records show that any of the following actions were taken with this student:		14a.	14a.	14a.
a. Expelled or suspended from school?		1 ☐ Yes 2 ☐ No	1 ☐ Yes 2 ☐ No	1 ☐ Yes 2 ☐ No
b. Committed to a correctional institution?		b. 1 ☐ Yes 2 ☐ No	b. 1 ☐ Yes 2 ☐ No	b. 1 ☐ Yes 2 ☐ No
c. On probation from a correctional institution?		c. 1 ☐ Yes 2 ☐ No	c. 1 ☐ Yes 2 ☐ No	c. 1 ☐ Yes 2 ☐ No

FORM LGT-2(S) (6-17-68)

Census use only	Control No.			
Please complete questions 11–14 below for each student whose name appears to the right		(4) Name — *Last, first*	(5) Name — *Last, first*	(6) Name — *Last, first*
		Sex M F / Year attended	Sex M F / Year attended	Sex M F / Year attended
11a. What is this student's score based on the most recent group scholastic aptitude or intelligence test he has taken?		11a. I.Q. or other score _____ If other, specify type _____ × ☐ Has not taken test — *Skip to 12*	11a. I.Q. or other score _____ If other, specify type _____ × ☐ Has not taken test — *Skip to 12*	11a. I.Q. or other score _____ If other, specify type _____ × ☐ Has not taken test — *Skip to 12*
b. What is the full name of the most recent group scholastic aptitude or intelligence test he has taken?		b.	b.	b.
c. What level was it?		c.	c.	c.
d. What form was it?		d.	d.	d.
e. In what grade or year of school was this pupil at the time this test was administered? *(Mark only one for each student)*		e. 1 ☐ Before 9th grade 2 ☐ First year of high school (9th grade) 3 ☐ Second year of high school (10th grade) 4 ☐ Third year of high school (11th grade) 5 ☐ Fourth year of high school (12th grade)	e. 1 ☐ Before 9th grade 2 ☐ First year of high school (9th grade) 3 ☐ Second year of high school (10th grade) 4 ☐ Third year of high school (11th grade) 5 ☐ Fourth year of high school (12th grade)	e. 1 ☐ Before 9th grade 2 ☐ First year of high school (9th grade) 3 ☐ Second year of high school (10th grade) 4 ☐ Third year of high school (11th grade) 5 ☐ Fourth year of high school (12th grade)
12. What is (was) this student's grade point average (or equivalent) for his senior year?		12. Point average _____ × ☐ Has not completed senior year	12. Point average _____ × ☐ Has not completed senior year	12. Point average _____ × ☐ Has not completed senior year
13. How many days was this student absent from school during the past year (or last year he attended this school)?		13. Days absent _____	13. Days absent _____	13. Days absent _____
14. Do your records show that any of the following actions were taken with this student: a. Expelled or suspended from school?		14a. 1 ☐ Yes 2 ☐ No	14a. 1 ☐ Yes 2 ☐ No	14a. 1 ☐ Yes 2 ☐ No
b. Committed to a correctional institution?		b. 1 ☐ Yes 2 ☐ No	b. 1 ☐ Yes 2 ☐ No	b. 1 ☐ Yes 2 ☐ No
c. On probation from a correctional institution?		c. 1 ☐ Yes 2 ☐ No	c. 1 ☐ Yes 2 ☐ No	c. 1 ☐ Yes 2 ☐ No

Budget Bureau No. 41-R2352; Approval Expires December 1972

NOTICE – Your report to the Census Bureau is confidential by law (Title 13 U.S. Code). It may be seen only by sworn Census employees and may be used only for statistical purposes.

FORM LGT-231
(8-25-69)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

NATIONAL LONGITUDINAL SURVEYS

SURVEY OF WORK EXPERIENCE OF YOUNG MEN

1969

(001) 1 ☐ Respondent a noninterview in 1968 – *GO to page 23*

RECORD OF CALLS

Date	Time	Comments
1.	a.m. / p.m.	
2.	a.m. / p.m.	
3.	a.m. / p.m.	
4	a.m. / p.m.	

METHODS OF LOCATING RESPONDENT WHO HAS MOVED

		Successful	Unsuccessful
New occupants	002	1 ☐	2 ☐
Neighbors	003	1 ☐	2 ☐
Apartment house manager	004	1 ☐	2 ☐
Post office	005	1 ☐	2 ☐
School	006	1 ☐	2 ☐
Persons listed on information sheet	007	1 ☐	2 ☐
Other – *Specify*	008	1 ☐	2 ☐

RECORD OF INTERVIEW

Interview time Began	Interview time Ended	Date completed	Interviewed by
a.m. / p.m.	a.m. / p.m.		

NONINTERVIEW REASON

(009)
- ☐ Unable to contact respondent – *Specify*
- 6 ☐ Temporarily absent – *Give return date*
- 7 ☐ In Armed Forces – *Specify release date*
- 8 ☐ Institutionalized – *Specify type*
- 9 ☐ Refused
- 0 ☐ Deceased
- A ☐ Other – *Specify*

TRANSCRIPTION FROM HOUSEHOLD RECORD CARD

(010) **Item 13 – Marital status of respondent**

1 ☐ Married, spouse present
2 ☐ Married, spouse absent
3 ☐ Widowed
4 ☐ Divorced
5 ☐ Separated
6 ☐ Never married

If respondent has moved, enter new address

1. Number and street (011)

2. City | 3. County | 4. State | 5. ZIP code (012) (013)

I. EDUCATIONAL STATUS

1. Are you attending or enrolled in regular school?

(014) 1. 1 ☐ Yes – *ASK 2a*
2 ☐ No

When were you last enrolled?

(015) Month _____ Year _____ *SKIP to Check Item B*

2a. What grade are you attending?

(016) 2a. 1 Elementary 1 2 3 4 5 6 7 8
2 High school 1 2 3 4
3 College 1 2 3 4 5 6+

b. Are you enrolled as a full-time or part-time student?

(017) b.
1 ☐ Full-time
2 ☐ Part-time

CHECK ITEM A

Refer to item 77R on Information Sheet

☐ Respondent not in school in 1968 – *ASK 3a*
☐ Respondent in school in 1968 – *SKIP to Check Item C*

CHECK ITEM B

Refer to item 77R on Information Sheet

☐ Respondent in school in 1968 – *SKIP to Check Item F, page 4*
☐ All others – *SKIP to 23, page 6*

3a. At this time last year, you were not enrolled in school. How long had you been out of school before returning?

(018) 3a. Years _____

b. Why did you return?

(019) ☐ b.

c. In what curriculum are you enrolled?

(020) ☐☐ c. _____ *SKIP to 5*

CHECK ITEM C

Refer to item 77R on Information Sheet

☐ Respondent in high school in 1968, college now – *SKIP to 5*
☐ Other – *ASK 4*

4. Are you attending the same school as you were at this time last year

(021) 4. 1 ☐ Yes – *SKIP to 10*
2 ☐ No – *ASK 5*

5. What is the name of the school you now attend?

5.

6. Where is this school located?

(022) ☐☐ 6. City _____
County _____
State _____

7. Is this school public or private?

(023) 7. 1 ☐ Public
2 ☐ Private

8. When did you enter this school?

(024) 8. Month _____ Year _____

I EDUCATIONAL STATUS – Continued

CHECK ITEM D

Refer to item 2a and item 77R on Information sheet

- ☐ Respondent in college 1 now – *SKIP to 15a*
- ☐ Respondent in high school 1 now } *SKIP to 23, page 5*
- ☐ Respondent not in school in 1968 }
- ☐ Other – *ASK 9*

9. Why did you change schools?

(025) 9. ☐

10. Would you say you now like school more, about the same, or less than you did last year?

(026) 10.
- 1 ☐ More } *ASK 11*
- 2 ☐ Less }
- 3 ☐ About the same – *SKIP to 12*

11. Why do you like it more (less)?

(027) 11. ☐

12. Are you enrolled in the same curriculum now as you were last year?

(028) 12.
- ☐ Yes
  - 1 ☐ College – *SKIP to 15a*
  - 2 ☐ High school } *SKIP to 23, page 5*
  - 3 ☐ Elementary }
- 4 ☐ No – *ASK 13*

13. In what curriculum are you enrolled now?

(029) 13. ☐☐

14. How did you happen to change your curriculum?

(030) 14. ☐

☐ Respondent not now in college– *SKIP to Check Item E*

15a. How much is the full-time tuition this year at the college you attend?

(031) 15a. $ _____

b. Do you have a scholarship, fellowship, assistantship, or other type of financial aid this year?

(032) b.
- 1 ☐ Yes – *ASK c*
- 2 ☐ No – *SKIP to Check Item E*

c. What kind?

(033) c.
- 1 ☐ Scholarship
- 2 ☐ Fellowship
- 3 ☐ Assistantship
- 4 ☐ Loan
- 5 ☐ Other – *Specify* _____

d. How much is it per year?

(034) d. $ _____

CHECK ITEM E

Refer to item 77R on Information Sheet

- ☐ Respondent in college 3–6 in 1968 – *ASK 16a*
- ☐ Other – *SKIP to 23, page 5*

16a. Have you received a degree since last year at this time?

(035) 16a.
- 1 ☐ Yes – *ASK b*
- 2 ☐ No – *SKIP to 23, page 5*

b. What degree was it?

(036) b.
- 1 ☐ Bachelor's (B.A., BS., A.B.)
- 2 ☐ Master's (M.S., M.B., M.B.A)
- 3 ☐ Doctor's (Ph.D.)
- 4 ☐ Other – *Specify* _____

c. In what field did you receive your degree?

(037) c. ☐☐

d. Why did you decide to continue your education after receiving this degree?

(038) d. ☐ _____

SKIP to 23, page 5

I. EDUCATIONAL STATUS – Continued

CHECK ITEM F

Refer to item 77R on Information Sheet

- ☐ Respondent in high school 1–3 last year – *ASK 17a*
- ☐ Respondent in high school 4 last year – *SKIP to 18a*
- ☐ Respondent in college 1–3 last year – *SKIP to 20a*
- ☐ Respondent in college 4+ last year – *SKIP to 21a, page 5*
- ☐ Respondent in elementary school last year – *ASK 17a*

17a. At this time last year, you were attending your _____ year of high school. Did you complete that year? (039)

17a. 1 ☐ Yes
2 ☐ No

b. Why did you drop out of high school? (040)

b. ☐

c. Do you expect to return? (041)

c. 1 ☐ Yes – *ASK d*
2 ☐ No – *SKIP to 26a, page 6*

d. When do you expect to return? (042)

d. _____

SKIP to 23, page 5

18a. Did you graduate from high school? (043)

18a. 1 ☐ Yes – *SKIP to Check Item G*
2 ☐ No – *ASK b*

b. Why not? (044)

b. ☐

CHECK ITEM G (045)

Refer to item 78R on Information Sheet

1 ☐ Respondent had planned to enter college when interviewed in 1968 – *ASK 19a*
2 ☐ Respondent had not planned to enter college when interviewed in 1968 – *SKIP to 23, page 5*
3 ☐ Respondent not asked about educational goal – *SKIP to 23, page 5*

19a. When we talked to you last year, you said you planned to go to college. Have your plans changed? (045)

19a. 1 ☐ Yes – *ASK b*
2 ☐ No – *SKIP to c*

b. What caused your plans to change? (047)

b. 1 ☐ Poor grades, lacked ability, wasn't accepted because of low grades, etc.
2 ☐ Economic reasons (couldn't afford, had to work instead, unable to obtain financial assistance)
3 ☐ Disliked school, lost interest, had enough school
4 ☐ Military service
5 ☐ Personal health reasons
6 ☐ Other – *Specify* _____

SKIP to d

c. Why are you presently not enrolled in college? (048)

c. 1 ☐ Economic reasons (couldn't afford, have to work, unable to obtain financial assistance, etc.)
2 ☐ Was rejected or turned down
3 ☐ Waiting to be accepted by a school
4 ☐ Military service
5 ☐ Personal health reasons
6 ☐ Other – *Specify* _____

d. When do you plan to enroll in college? (049)

d. Month _____ Year _____ – *SKIP to 23*
x ☐ Don't plan to enroll – *SKIP to 26a, page 6*

I. EDUCATIONAL STATUS – Continued

20a. Last year at this time you were in college. Why did you decide to drop out?

(050) 20a. ☐☐

b. Do you expect to return?

(051) b. 1 ☐ Yes – *ASK c*
× ☐ No – *SKIP to 26a*

c. When do you think you will return?

(052) c. ☐☐

SKIP to 23

21a. Last year at this time you were in college Did you receive a degree?

(053) 21a. 1 ☐ Yes – *SKIP to 22a*
2 ☐ No – *ASK b*

b. Why did you decide to drop out?

(054) b. ☐☐

c. Do you expect to return?

(055) c. 1 ☐ Yes – *Ask d*
2 ☐ No – *SKIP to 26a*

d. When?

(056) d. ☐☐

SKIP to 23

22a. What degree did you receive?

(057) 22a. 1 ☐ Associate (2 year course)
2 ☐ Bachelor's (B.A., B.S. A.B.)
3 ☐ Master's (M.S., M.B., M.B.A.)
4 ☐ Doctor's (Ph.D.)
5 ☐ Other – *Specify* _____

b. In what field of study did you receive your degree?

(058) b. ☐☐

23. How much education would you like to get?

(059) 23. 1 High school ☐ 1 ☐ 2 ☐ 3 ☐ 4

2 College
- ☐ 2 yrs. (complete junior college)
- ☐ 4 yrs. (graduate from 4-year college)
- ☐ 6 yrs. (master's degree or equivalent)
- ☐ 7+ yrs. (Ph.D. or professional degree)

CHECK ITEM H

Refer to item 78R on Information Sheet

☐ Educational goal different from 1968 – *ASK 24*
☐ Educational goal same as in 1968 – *SKIP to 25*
☐ Respondent not asked about educational goal in 1968 – *SKIP to 25*

24. Last year you said you would like to get *(amount of education indicated in 1968)*.

Why have you changed your plans?

(060) 24. ☐

25. As things stand now how much education do you think you will actually get?

(061) 25. 1 High school ☐ 1 ☐ 2 ☐ 3 ☐ 4

2 College
- ☐ 2 yrs. (complete junior college)
- ☐ 4 yrs. (graduate from 4-year college)
- ☐ 6 yrs. (master's degree or equivalent)
- ☐ 7+ yrs. (Ph.D. or professional degree)

I. EDUCATIONAL STATUS – Continued

☐ Respondent now attends school – *SKIP to 27a*

26a. Since this time last year have you taken any training courses or educational programs of any kind, either on the job or elsewhere?

(062) **26a.** 1 ☐ Yes – *ASK b*

2 ☐ No – *SKIP to 27a*

b. What kind of training or education program did you take? *(Specify below, then mark one box)*

_____

_____

(063) **b.** 1 ☐ Professional, technical
2 ☐ Managerial
3 ☐ Clerical
4 ☐ Skilled manual
5 ☐ Other

c. Where did you take this training course? *(Specify below, then mark one box)*

_____

_____

(064) **c.** 1 ☐ Business college, technical institute
2 ☐ Company training school
3 ☐ Correspondence course
4 ☐ Regular school
5 ☐ Other

d. How long did you attend this course or program?

(065) **d.**

Months _____

e. How many hours per week did you spend on this training?

(066) **e.** 1 ☐ 1–4
2 ☐ 5–9
3 ☐ 10–14
4 ☐ 15–19
5 ☐ 20 or more

f. Did you complete this program?

(067) **f.** 1 ☐ Yes – **When?**

Month _____ Year _____ *SKIP to h*

2 ☐ No, dropped out – **When?**

Month _____ Year _____ *ASK g*

x ☐ No, still enrolled – *SKIP to h*

g. Why didn't you complete this program?

(068) **g.** 1 ☐ Found a job
2 ☐ Interferred with school
3 ☐ Too much time involved
4 ☐ Lost interest
5 ☐ Too difficult
6 ☐ Other – *Specify* _____

h. Why did you decide to get more training?

(069) **h.** 1 ☐ To obtain work
2 ☐ To improve current job situation
3 ☐ To get better job than present one
4 ☐ In military service
5 ☐ Other – *Specify* _____

i. Do you use this training on your present job?

(070) **i.** 1 ☐ Yes
2 ☐ No
3 ☐ Not employed

I. EDUCATIONAL STATUS – Continued

27a. Have you ever served in the U.S. Armed Forces?

(071) 27a. 1 ☐ Yes
2 ☐ No – *SKIP to 28*

b. What was your rank in the Armed Forces at the time of separation from active duty?

(072) b. ☐☐

c. When were you separated from active duty?

(073) c. 1 ☐ Before October 15, 1966 – *SKIP to 28*
2 ☐ After October 15, 1966 – *ASK d*

d. In what branch of the Armed Forces did you serve?

(074) d. 1 ☐ Navy
2 ☐ Army
3 ☐ Air Force
4 ☐ Marines
5 ☐ Coast Guard

e. How did you enter the Armed Forces?

(075) e. 1 ☐ Drafted
2 ☐ Enlisted as a regular
3 ☐ Entered through OCS, ROTC, Service Academy
4 ☐ Other – *Specify* _____

f. How many months were you on active duty in the Armed Forces?

(076) f.
Months _____

g. How old were you when you were separated from active service?

(077) g.
Years _____

h. Other than basic training, what kinds of training did you receive while you were in the Armed Forces?

(078) h.
0 ☐ None – *SKIP to l*

i. Did you complete this program?

(079) i. 1 ☐ Yes
2 ☐ No

j. How long did you attend this training?

(080) j.
Months _____

k. Do you use this training on your present (last) job?

(081) k. 1 ☐ Yes
2 ☐ No
3 ☐ Never worked

l. What military occupation did you have for the longest time?

(082) l. ☐☐☐

m. Were you an officer or enlisted man at that time?

(083) m. 1 ☐ Commissioned or Warrant Officer
2 ☐ Enlisted man

Notes

(084)
(085)
(086)

II. CURRENT LABOR FORCE STATUS

28. What were you doing most of LAST WEEK – working, going to school, or something else?

(087)

1 ☐ WK – Working – *SKIP to 29b*
2 ☐ J – With a job but not at work
3 ☐ LK – Looking for work
4 ☐ S – Going to school
5 ☐ U – Unable to work – *SKIP to 32*
6 ☐ OT – Other – *Specify* →

_____

_____

29c. Do you USUALLY work 35 hours or more a week at this job?

(088)

1 ☐ Yes – **What is the reason you worked less than 35 hours LAST WEEK?**

2 ☐ No – **What is the reason you USUALLY work less than 35 hours a week?**

(Mark the appropriate reason)

(089)

01 ☐ Slack work
02 ☐ Material shortage
03 ☐ Plant or machine repair
04 ☐ New job started during week
05 ☐ Job terminated during week
06 ☐ Could find only part-time work
07 ☐ Labor dispute
08 ☐ Did not want full-time work
09 ☐ Full time work week under 35 hours
10 ☐ Attends school
11 ☐ Holiday (legal or religious)
12 ☐ Bad weather
13 ☐ Own illness
14 ☐ On vacation
15 ☐ Too busy with housework, personal business, etc.
16 ☐ Other – *Specify* →

_____

(SKIP to 33a and enter job worked at last week)

29a. Did you do any work at all LAST WEEK, not counting work around the house?

(090)

1 ☐ Yes 2 ☐ No – *SKIP to 30a*

b. How many hours did you work LAST WEEK at all jobs?

(091)

_____

CHECK ITEM I

Respondent worked –

☐ 49 hours or more – *SKIP to 33a and enter job worked at last week*
2 ☐ 1–34 hours – *ASK c*
3 ☐ 35–48 hours – *ASK d and e*

d. Did you lose any time or take any time off LAST WEEK for any reason such as illness, holiday, or slack work?

(092)

☐ Yes – **How many hours did you take off** _____

00 ☐ No – *Go to 29e*

NOTE: Correct item 29b if last time not already deducted; if item 29b is reduced below 35 hours, ask item e, otherwise SKIP to 33a.

e. Did you work any overtime or at more than one job LAST WEEK?

(093)

☐ Yes – **How many extra hours did you work?** . . . _____

00 ☐ No

NOTE Correct Item 29b if extra hours not already included and SKIP to 33a.

(If "J" in 28, SKIP to 30b)

30a. Did you have a job (or business) from which you were temporarily absent or on layoff LAST WEEK?

(094)

1 ☐ Yes 2 ☐ No – *SKIP to 31a*

b. Why were you absent from work LAST WEEK?

(095)

1 ☐ Own illness
2 ☐ On vacation
3 ☐ Bad weather
4 ☐ Labor dispute
5 ☐ New job to begin within 30 days – *ASK 31c and 31d(2)*
6 ☐ Temporary layoff (less than 30 days) – *ASK 31d(3)*
7 ☐ Indefinite layoff (30 days or more or no definite recall date) – *ASK 31d(3)*
8 ☐ School interfered
9 ☐ Other – *Specify* →

_____

c. Are you getting wages or salary for any of the time off LAST WEEK?

(096)

1 ☐ Yes
2 ☐ No
3 ☐ Self-employed

d. Do you usually work 35 hours or more a week at this job?

(097)

1 ☐ Yes 2 ☐ No

(Go to 33a and enter job held last week.)

Notes

II. CURRENT LABOR FORCE STATUS – Continued

(If "LK" in 28, SKIP to 31b)

31a. Have you been looking for work during the past 4 weeks?

098 1 ☐ Yes 2 ☐ No – *SKIP to 32*

b. What have you been doing in the last 4 weeks to find work?

(Mark all methods used; do not read lists.)

099 00 ☐ Nothing – *SKIP to 32*

Checked with:
- 01 ☐ State employment agency
- 02 ☐ Private employment agency
- 03 ☐ Employer directly
- 04 ☐ Friends or relatives

05 ☐ Placed or answered ads

06 ☐ School employment service

07 ☐ Other – *Specify – e.g., Will file union or professional registers, etc.*

c. Why did you start looking for work? Was it because you lost or quit a job at that time *(pause)* or was there some other reason?

100 1 ☐ Lost job 4 ☐ Wanted temporary work
2 ☐ Quit job 5 ☐ Other – *Specify*
3 ☐ Left school

d. (1) How many weeks have you been looking for work?

(2) How many weeks ago did you start looking for work?

(3) How many weeks ago were you laid off?

101 Number of weeks _____

e. Have you been looking for full time or part time work?

102 1 ☐ Full-time 2 ☐ Part-time

f. Is there any reason why you could not take a job LAST WEEK?

103 Yes →
- 1 ☐ Needed at home
- 2 ☐ Temporary illness
- 3 ☐ Going to school
- 4 ☐ Other – *Specify*

5 ☐ No

g. When did you last work at a regular job or business lasting two consecutive weeks or more, either full-time or part-time?

104 1 ☐ October 15, 1968 or later – *Specify both*

105 Month _____ Year _____ *SKIP to 33a*

2 ☐ All others – *SKIP to 33a, page 13*

32. When did you last work at a regular job or business lasting two consecutive weeks or more, either full-time or part-time?

106 1 ☐ October 15, 1969 or later – *Specify both* *SKIP to 33a*

107 Month _____ Year _____

2 ☐ Before October 15, 1968 and "unable" now and "unable" in item 79R on the Information Sheet – *SKIP to 37a, page 17*

3 ☐ All others – *SKIP to 43a, page 14*

DESCRIPTION OF JOB OR BUSINESS

33a. For whom did you work? *(Name of company, business, organization, or other employer)*

108 ☐☐

b. In what city and State is . . . located?

City _____

State _____

109 ☐☐☐

c. What kind of business or industry is this?
(For example: TV and radio manufacturer, retail shoe store, State Labor Department, farm)

d. Were you –

110
- 10 ☐ **P** – An employee of a **PRIVATE** company, business, or individual for wages, salary, or commissions?
- 20 ☐ **G** – A **GOVERNMENT** employee (Federal, State, county, or local)?
- 30 ☐ **O** – Self-employed in your **OWN** business, professional practice, or farm?
  (If not a farm)
  Is this business incorporated?
  31 ☐ Yes 32 ☐ No
- 40 ☐ **WP** – Working **WITHOUT PAY** in family business or farm?

111 ☐☐☐

e. What kind of work were you doing?
(For example: electrical engineer, stock clerk, typist, farmer)

f. What were your most important activities or duties?
(For example: types, keeps account books, files, sells cars, operates printing press, cleans buildings, finishes concrete)

g. What was your job title?

II. CURRENT LABOR FORCE STATUS – Continued

CHECK ITEM J

Refer to item 81R(1) on Information Sheet

(112) 1 ☐ Current (last) employer same as last year *(Entry in 33a and Information Sheet item 81R(1) are the same)* – *SKIP to Check Item K*

2 ☐ All other – *ASK 34a*

34a. How did you find out about this job?

(113)

34a. 01 ☐ School employment service (or counselor)
02 ☐ State employment agency
03 ☐ Private employment agency
04 ☐ Checked directly with employer
05 ☐ Newspaper ads
06 ☐ Friends or relatives
07 ☐ Other – *Specify* _____

b. When did you start working at this job or business?

Respondent now enrolled in school – *SKIP to Check Item K*

(114)

b. Month _____ Year _____

c. Is this the first job at which you worked at least one month since you stopped going to school full-time?

(115)

c. 1 ☐ Yes – *SKIP to Check Item K*
2 ☐ No – *ASK d*

d. When did you take your first job at which you worked at least a month after you stopped going to school full-time?

(116)

d. Month _____ Year _____

CHECK ITEM K

☐ "P" or "G" in 33d – *ASK 35a*

☐ "O" or "WP" in 33d – *SKIP to Check Item L*

35a. Altogether, how much do (did) you usually earn at your present (last) job before deductions?

(If amount given per hour, record dollars and cents, otherwise, round to nearest dollar.)

(117)

35a. $_____ . _____ Per: (118)
(Dollars) *(Cents)*

1 ☐ Hour
2 ☐ Day
3 ☐ Week
4 ☐ Biweekly
5 ☐ Month
6 ☐ Year
7 ☐ Other →

$_____ Per:
(Dollars only)

Specify _____

b. How many hours per week do (did) you usually work on this job?

(119)

d. Hours _____

c. Are (were) your wages (salary) on this job set by a collective bargaining agreement between your employer and a union or employee association?

(120)

c. 1 ☐ Yes – *ASK d*
2 ☐ No – *SKIP to f*

d. What is the name of the union or employee association?

d. _____

e. Are you a member of that union or employee association?

(121)

e. 1 ☐ Yes
2 ☐ No

II. CURRENT LABOR FORCE STATUS – Continued

35f. Do (did) you receive extra pay when you work(ed) over a certain number of hours?

(122) **35f.**
1 ☐ Yes – *ASK g*
2 ☐ No
3 ☐ No, but received compensating time off
4 ☐ Never work overtime
} *SKIP to Check Item L*

g. After how many hours do (did) you receive extra pay?

(123) **g.** _____ Hours per day

(124) _____ Hours per week

h. For all hours worked over *(entry in g)* are (were) you paid straight time, time and one-half, double time or what?

(125) **h.**
1 ☐ Compensating time off
2 ☐ Straight time
3 ☐ Time and one-half
4 ☐ Double time
5 ☐ Other – *Specify* _____

CHECK ITEM L

Refer to items 80R and 81R(1) on Information Sheet

(126)
1 ☐ Respondent employed in both 1967 and 1968 but with DIFFERENT employers(names of employer in 80R and 81R(1) are different – *ASK 36*
2 ☐ All others – *SKIP to Check Item M*

36. Two years ago you were working at *(name of company in 80R)*.
Why did you happen to leave that job?

(127) ☐☐ **36.**

CHECK ITEM M

Respondent currently is in –
☐ Labor Force Group A ("WK" or "J" in 28 or "Yes" in 29a or 30a) – *Go to Check Item N*
☐ All others – *SKIP to Check Item O*

Notes

(128)
(129)
(130)

III. WORK EXPERIENCE AND ATTITUDES

CHECK ITEM N

(131) Current employer SAME as last year *(Entries in 33a and item 81R(1) of the Information Sheet are the same)* AND

1 ☐ a. Current kind of work SAME as last year *(Entries in 33c and item 81R(2) of the Information Sheet are the same) – SKIP to 38a*

2 ☐ b. Current kind of work DIFFERENT from last year *(Entries in 33c and item 81R(2) of the Information Sheet are different) – ASK 37*

3 ☐ Current employer DIFFERENT from last year *(Entries in 33a and item 81R(1) of the Information Sheet are different – SKIP to Check Item O*

37. I see that you are not doing the same kind of work you were doing at this time last year.

Why would you say you are no longer doing this kind of work?

(132) **37.**
1 ☐ Promotion
2 ☐ Job was eliminated
3 ☐ "Bumped" from job
4 ☐ Other – *Specify* _____

38a. During the past 12 months, have you worked any place other than *(entry in 33a)*?

(If more than one, ask about longest)

(133) **38a.**
☐ Yes – **How many other places?** _____ *ASK b*
o ☐ No – *SKIP to 43a*

b. For whom did you work?

b.

c. Were you working for *(entry in 33a)* **and** *(entry in 38b)* **at the same time?**

(134) **c.**
1 ☐ Yes – *SKIP to 43a*
2 ☐ No – *SKIP to 42b*

CHECK ITEM O

☐ Respondent was in Labor Force Group B or C last year *(Item 79R on Information Sheet) – SKIP to 39c*

☐ All others – *ASK 39a*

39a. Have you held any jobs other than *(entry in 33a)* **in the past 12 months?**

(If more than one, ask about longest)

(135) **39a.**
☐ Yes – **How many other jobs?** _____
o ☐ No – *SKIP to 40a*

b. For whom did you work?

b.

SKIP to 42b

c. Last year at this time you weren't working. How many jobs have you held since then?

(If more than one, ask about longest)

(136) **c.**

d. For whom did you work?

(137) **d.** 1 ☐ _____ *SKIP to 42b*
o ☐ Same as last job in 33a – *SKIP to 43a*

40a. Last year at this time you were working at *(name of company in item 81R(1) on Information Sheet)*. **When did you stop working there?**

(138) **40a.**
Month _____ Year _____

b. Why did you happen to leave that job?

(139) **b.**

c. Last year, you were working as *(kind of work in item 81R(2) on Information Sheet)*. **Did you do any other kind of work at that job before you left it?**

(140) **c.**
☐ Yes – **How many other kinds?** _____ *ASK 41a*
o ☐ No – *SKIP to 41b*

41a. What kind of work did you do?

(If more than one, ask about longest)

(141) **41a.**

b. How many jobs have you held since you stopped working at *(name of company in item 81R(1) on Information Sheet)* **and started your present (last) job?**

(142) **b.**
Number _____
o ☐ None – *SKIP to 43a*

III. WORK EXPERIENCE AND ATTITUDES – Continued

(If more than one, ask about longest)

42a. Now I'd like to know about the job you had since you stopped working at *(entry in 81R(1))*.

For whom did you work? (143)

42a. 1 ☐ _____

0 ☐ Same employer as 33a – *SKIP to 43a*

b. What kind of business or industry was that? (144)

b. ☐☐☐ _____

c. Were you –

(1) An employee of a **PRIVATE** company, business, or individual for wages, salary, or commission? (145)

(2) **A GOVERNMENT** employee (Federal, State, county, or local)?

(3) Self-employed in your **OWN** business, professional practice, or farm?

(4) Working **WITHOUT PAY** in family business or farm?

c.

1 ☐ P – Private

2 ☐ G – Government

3 ☐ O – Self-employed

4 ☐ WP – Without pay

d. How many hours per week did you usually work? (146)

d. Number of hours _____

e. When did you **START** working at that job? (147)

e. Month _____ Year _____

f. When did you **STOP** working at that job? (148)

f. Month _____ Year _____

g. How did you happen to leave that job? (149)

g. ☐☐

h. What kind of work were you doing when you left that job? (150)

h. ☐☐☐ _____

i. Did you ever do any other kind of work at that job? (151)

i.

☐ Yes – **How many other kinds?** _____ *ASK j*

0 ☐ No – *SKIP to 43a*

j. What kind of work? (152)
(If more than one, ask about longest)

j. ☐☐☐ _____

43a. During the past 12 months, in how many different weeks did you do any work at all? (153)

43a. Number of weeks _____

00 ☐ None – *SKIP to 45a*

☐ Respondent not now in school – *SKIP to c*

b. Were these during summer vacation from school, or during the school year? (154)

b.

1 ☐ Summer vacation only

2 ☐ School year only

3 ☐ Both

c. During the weeks that you worked in the last 12 months, how many hours per week did you usually work? (155)

c.

1 ☐ 1– 4

2 ☐ 5–14

3 ☐ 15–24

4 ☐ 25–34

5 ☐ 35–40

6 ☐ 41–48

7 ☐ 49 or more

III. WORK EXPERIENCE AND ATTITUDES – Continued

CHECK ITEM P

☐ 52 weeks in 43a – *ASK 44a*

☐ 1–51 weeks in 43a – *SKIP to 44b*

44a. Did you lose any full weeks of work during the past 12 months because you were on layoff from a job or lost a job?

(156) 44a.

☐ Yes – **How many weeks?** _____ *(Adjust item 43a and skip to 44c)*

00 ☐ No – *SKIP to Check Item Q*

b. You say you worked *(entry in 43a)* **weeks during the past 12 months. In any of the remaining** *(52 minus entry in 43a)* **weeks were you looking for work or on layoff from a job?**

(156) b.

☐ Yes – **How many weeks?** _____

00 ☐ No – *SKIP to Check Item Q*

c. Were all of these weeks in one stretch?

(157) c.

1 ☐ Yes, 1 stretch

2 ☐ No, 2 stretches

3 ☐ No, 3 or more stretches

☐ Respondent not now in school – *SKIP to Check Item Q*

d. Were these during summer vacation from school, or during the school year?

(158) d.

1 ☐ Summer vacation only

2 ☐ School year only

3 ☐ Both

SKIP to Check Item Q

45a. Even though you did not work during the past 12 months, did you spend any time trying to find work or on layoff from a job?

(159) 45a.

1 ☐ Yes – *ASK b*

2 ☐ No – *SKIP to 46*

b. How many different weeks during the last 12 months were you looking for work or on layoff from a job?

(160) b.

Number of weeks _____

☐ Respondent not now in school – *SKIP to Check Item Q*

c. Were these during summer vacation from school, or during the school year?

(161) c.

1 ☐ Summer vacation only

2 ☐ School year only

3 ☐ Both

CHECK ITEM Q

Refer to items 43a, 44a, 44b, 45b

☐ All weeks accounted for – *SKIP to Check Item R*

☐ Some weeks not accounted for – *ASK 46*

46. Now let me see. During the past 12 months, there were about *(52 minus entries in items 43a, 44a, 44b, 45b)* _____ **weeks that you were not working or looking for work. What would you say was the main reason that you were not looking for work?**

(Specify below, then mark one box)

_____

(162) (163) 46.

Weeks _____

1 ☐ Ill or disabled and unable to work

2 ☐ In school

3 ☐ Couldn't find work

4 ☐ Vacation

5 ☐ In Armed Forces

6 ☐ Other

CHECK ITEM R

Respondent is in –

☐ Labor Force Group A ("WK" or "J" in 28 or "Yes" in 29a or 30a) – *SKIP to Check Item S*

☐ Labor Force Group B ("LK" in 28 or "Yes" in 31a) – *SKIP to 49a*

☐ Labor Force Group C (All others) – *ASK 47a*

Notes

III. WORK EXPERIENCE AND ATTITUDES – Continued

47a. Do you intend to look for work of any kind in the next 12 months?

Respondent's comments: _____

(164) **47a.**
1 ☐ Yes – definitely } *ASK b*
2 ☐ Yes – probably }
☐ Maybe – **What does it depend on?** _____ } *SKIP to 48a*
3 ☐ No
4 ☐ Don't know *SKIP to 48a*

b. When do you intend to start looking for work?

(165) **b.** Month _____

c. What kind of work do you think you will look for?

(166) ☐☐☐ **c.** _____

d. What will you do to find work? *(Mark as many as apply)*

(167) **d.** Check with
01 ☐ School employment service (or counselor)
02 ☐ State employment agency
03 ☐ Private employment agency
04 ☐ Directly with employer
05 ☐ Friends or relatives
06 ☐ Place or answer newspaper ads
07 ☐ Other – *Specify* _____

48a. Why would you say that you are not looking for work at this time?

(168) **48a.**
1 ☐ School
2 ☐ Personal, family reasons
3 ☐ Health reasons
4 ☐ Waiting to be called into military service
5 ☐ Believes no work available
6 ☐ Does not want to work at this time of year
7 ☐ Other or no reason

b. If you were offered a job by some employer in THIS AREA, do you think you would take it?

Respondent's comments: _____

(169) **b.**
01 ☐ Yes, definitely
02 ☐ Yes, if it is something I can do
03 ☐ Yes, if satisfactory wage
04 ☐ Yes, if satisfactory location
05 ☐ Yes, other _____ } *ASK c*

06 ☐ No, health won't permit
07 ☐ No, it will interfere with school
08 ☐ No, parents don't want me to
09 ☐ No, don't need the money
10 ☐ No, other _____ } *SKIP to 51a, page 17*

c. How many hours per week would you be willing to work?

(170) **c.**
1 ☐ 1–4
2 ☐ 5–14
3 ☐ 15–24
4 ☐ 25–34
5 ☐ 35–40
6 ☐ 41–48
7 ☐ 49 or more

☐☐☐

d. What kind of work would it have to be?

(171) **d.** _____

e. What would the wage or salary have to be?

(172) **e.** $_____ . _____ Per: (173)
(Dollars) *(Cents)*
1 ☐ Hour
2 ☐ Day
3 ☐ Week
4 ☐ Biweekly
5 ☐ Month
6 ☐ Year
7 ☐ Other

$_____ Per:
(Dollars only)

Specify _____

SKIP to 51a, page 17

III. WORK EXPERIENCE AND ATTITUDES – Continued

49a. What type of work are you looking for?

(174) ☐☐☐ 49a.

b. What would the wage or salary have to be for you to be willing to take it?

(175) b. $_____ . _____ Per: (176)
(Dollars) *(Cents)*

1 ☐ Hour
2 ☐ Day
3 ☐ Week
4 ☐ Biweekly
5 ☐ Month
6 ☐ Year
7 ☐ Other →

$_____ Per:
(Dollars only)

Specify _____

c. Are there any restrictions, such as hours or location of job that would be a factor in your taking a job?

(177) c. ☐ Yes – **What are they?** _____ *SKIP to 51a*

0 ☐ No

CHECK ITEM S

Respondent

☐ Was in Labor Force Group C last year *(item 79R on Information Sheet) – ASK 50*

☐ All others – *SKIP to 51a*

50. At this time last year, you were not looking for work. What made you decide to take a job?

(178) 50.

1 ☐ Recovered from illness
2 ☐ Bored
3 ☐ Completed education
4 ☐ Needed money
5 ☐ Other – *Specify* _____

51a. How do you feel about the job you have now? Do you like it very much, like it fairly well, dislike it somewhat, dislike it very much?

(179) 51a

1 ☐ Like it very much
2 ☐ Like it fairly well
3 ☐ Dislike it somewhat
4 ☐ Dislike it very much

b. What are the things you like best about your job?

(1) _____ (180)

(2) _____ (181)

(3) _____ (182)

c. What are the things about your job that you don't like?

(1) _____ (183)

(2) _____ (184)

(3) _____ (185)

III. WORK EXPERIENCE AND ATTITUDES – Continued

52. **Suppose someone IN THIS AREA offered you a job in the same line of work you're in now. How much would the new job have to pay for you to be willing to take it?**

(If amount given per hour, record dollars and cents. Otherwise, round to the nearest dollar.)

Respondent's comments _____

(186) 52. $_____ . _____ Per: (187)
(Dollars) *(Cents)*

$_____ Per:
(Dollars only)

01 ☐ Hour
02 ☐ Day
03 ☐ Week
04 ☐ Biweekly
05 ☐ Month
06 ☐ Year
07 ☐ Other →

Specify _____

(187)
08 ☐ I wouldn't take it at any conceivable pay
09 ☐ I would take a steady job at same or less pay
10 ☐ Would accept job; don't know specific amount

CHECK ITEM T

☐ Respondent is enrolled in school this year – *SKIP to 54a*
☐ All others – *ASK 53*

53. **What if this job were IN SOME OTHER PART OF THE COUNTRY – how much would it have to pay in order for you to be willing to take it?**

(If amount given per hour, record dollars and cents. Otherwise, round to the nearest dollar.)

Respondent's comments _____

(188) 53. $_____ . _____ Per: (189)
(Dollars) *(Cents)*

_____ Per:
(Dollars only)

01 ☐ Hour
02 ☐ Day
03 ☐ Week
04 ☐ Biweekly
05 ☐ Month
06 ☐ Year
07 ☐ Other →

Specify _____

(189)
08 ☐ I wouldn't take it at any conceivable pay
09 ☐ I would take a steady job at same or less pay
10 ☐ Would accept job; don't know specific amount
11 ☐ Depends on location, cost of living

54a. **If, by some chance, you were to get enough money to live comfortably without working, do you think you would work anyway?**

(190) 54a.
1 ☐ Yes – *ASK b*
2 ☐ No – *SKIP to c*
3 ☐ Undecided – *SKIP to d*

b. **Why do you feel you would work?**

(191) ☐ b. *SKIP to 55*

c. **Why do you feel you would not work?**

(192) ☐ c. *SKIP to 55*

d. **On what would it depend?**

(193) ☐ d. _____

Notes

(194)
(195)
(196)

IV. FUTURE JOB PLANS

55. Now I would like to talk to you about your future job plans. What kind of work would you like to be doing when you are 30 years old?

55. _____

_____

_____

(197) ☐☐☐

× ☐ Same as present job

999 ☐ Don't know

CHECK ITEM U

(198)

1 ☐ Respondent's future job plans are the same as 1968 *(Entries in 55 and item 82R on the Information Sheet are the same) – SKIP to 57a*

2 ☐ Respondent's future job plans differ from 1968 *(Entries in 55 and item 82R of Information Sheet differ) – ASK 56*

3 ☐ Respondent not asked about future job plans in 1968 – *SKIP to 57a*

56. Last year when we talked to you, you said you thought that you'd like to be *(entry in item 82R of Information Sheet)*. Why would you say you have changed your plans?

56. _____

_____

(199) ☐

Notes

V. ASSETS AND INCOME

57a. So far as your overall financial position is concerned, would you say you are better off, about the same, or worse off now than you were at this time last year?

(200) **57a.**
1 ☐ Same – *SKIP to Check Item V*
2 ☐ Better off } *ASK b*
3 ☐ Worse off }

b. In what ways are you (better, worse) off?

(201) **b.** ☐

CHECK ITEM V

☐ Respondent is NOT head of household – *SKIP to 59a*
☐ Respondent is head of household – *ASK 58a*

58a. In the last 12 months, did you (or your wife) receive financial assistance from any of your relatives?

(202) **58a.**
1 ☐ Yes – *ASK b–c*
2 ☐ No – *SKIP to 59a*

b. From whom?

(203) **b.** ☐

c. How much did you receive?

(204) **c.** $ _____

Now I would like to ask a few questions about your income in the last 12 months.

	Respondent	Wife ☐ Not married
59a. How much did you (or your wife) receive from wages, salary, commissions, or tips from all jobs, before deductions for taxes or anything else?	(205) **59a.** $ _____ ☐ None	(210) $ _____ ☐ None
b. Did you (or your wife) receive any income from working on your own or in your own business or farm? $ _____ (Gross Income) less $ _____ (Expenses) $ _____ (Net Income)	(206) **b.** ☐ Yes – **How much?** $ _____ ☐ No	(211) ☐ Yes – **How much?** $ _____ ☐ No
c. Did you (or your wife) receive any unemployment compensation?	(207) **c.** ☐ Yes **(1) How many weeks?** _____ (208) **(2) How much?** $ _____ ☐ No	(212) ☐ Yes **(1) How many weeks?** _____ (213) **(2) How much?** $ _____ ☐ No
d. Did you (or your wife) receive any other income, such as rental income, interest or dividends, income as a result of disability or illness, etc.?	(209) **d.** ☐ Yes – **How much?** $ _____ ☐ No	(214) ☐ Yes – **How much?** $ _____ ☐ No

CHECK ITEM W

(215)
1 ☐ Respondent (and wife) lives alone – *SKIP to 60b*
2 ☐ All others – *ASK 60a (If two or more RELATED respondents in household, ask 60a–b only once, and transcribe answers from the first to the other questionnaires.)*

60a. In the past 12 months, what was the total income of **ALL** family members living here?

(Show flashcard)

(216) **60a.**
01 ☐ Under $1,000
02 ☐ $1,000–$1,999
03 ☐ 2,000– 2,999
04 ☐ 3,000– 3,999
05 ☐ 4,000– 4,999
06 ☐ 5,000– 5,999
07 ☐ 6,000– 7,499
08 ☐ 7,500– 9,999
09 ☐ 10,000–14,999
10 ☐ 15,000–24,999
11 ☐ 25,000 and over

b. Did anyone in this family receive any welfare or public assistance in the last 12 months?

(217) **b.**
1 ☐ Yes
2 ☐ No

VI. FAMILY BACKGROUND

61. How many persons not counting yourself (or your wife), are dependent upon you for at least one-half of their support?

(218) 61.

Number _____

0 ☐ None

CHECK ITEM X

Refer to name and address label on cover page

(219)

1 ☐ Respondent lives in same area (SMSA or county) as in 1968 – *SKIP to 64*

2 ☐ Respondent lives in different area (SMSA or county) than in 1968 – *ASK 62a*

62a. At this time last year you were living in *(city in address on cover page)*. **How many miles from here was that?**

(220) 62a.

Miles _____

b. How did you happen to move here?

(221) b. ☐

☐ Respondent currently in school – *SKIP to 63c*

63a. Did you have a job lined up here at the time you moved?

(222) 63a.

1 ☐ Yes, different from job held at time of move

2 ☐ Yes, same as job held at time of move

3 ☐ Yes, transferred job in same company

SKIP to c

4 ☐ No – *ASK b*

b. How many weeks did you look before you found work?

(223) b.

Weeks _____

00 ☐ Did not look for work

99 ☐ Still haven't found work

c. In the past 12 months, have you lived in any area (SMSA or county) other than the present one or the one in which you lived when we interviewed you last year?

(224) c.

☐ Yes – **How many?**

_____

SKIP to 65a

0 ☐ No

64. Have you lived in any area (SMSA or county) other than the present one in the past 12 months?

(225) 64.

☐ Yes – **How many?**

_____

0 ☐ No

65a. What is your present draft classification?

65a.

(226) ☐☐

00 ☐ Respondent is under 18 – *SKIP to Check Item Y*

b. *(If 1-Y or 1-F)* **Why were you rejected?**

(227) b.

1 ☐ Failed both physical and written test

2 ☐ Failed physical test

3 ☐ Failed written test

4 ☐ Not accepted for other reasons

5 ☐ Don't know reason

VI. FAMILY BACKGROUND – Continued

CHECK ITEM Y

(228) 1 ☐ Father lives in household
2 ☐ Father deceased
3 ☐ Other – *ASK 66a*
} *SKIP to Check Item Z*

66a. During the past 12 months, about how many weeks did your father work either full-time or part-time (not counting work around the house)?

66a. (229) Weeks _____
00 ☐ Did not work
99 ☐ Don't know
} *SKIP to Check Item Z*

b. Did your father usually work full-time or part-time?

(230) b. 1 ☐ Full-time
2 ☐ Part-time

c. What kind of work was he doing?
(If more than one, record the one worked at longest)

(231) c. ☐☐☐

CHECK ITEM Z

(232) 1 ☐ Mother lives in household
2 ☐ Mother deceased
3 ☐ Other – *ASK 67a*
} *SKIP to 68*

67a. During the past 12 months, about how many weeks did your mother work either full-time or part-time (not counting work around the house)?

67a. (233) Weeks _____
00 ☐ Did not work
99 ☐ Don't know
} *SKIP to 68*

b. Did your mother usually work full-time or part-time?

(234) b. 1 ☐ Full-time
2 ☐ Part-time

c. What kind of work was she doing?
(If more than one, record the one worked at longest)

(235) c. ☐☐☐

Notes

(236)
(237)
(238)

FORM LGT-231 (6-25-69)

Now I have a few questions about the education and work experience of the other family members living here.

Line number	Name — List below all persons living here who are related to respondent. *Enter line number from the Household Record Card in column 68.*	Relationship to respondent — *Example: wife, son, daughter-in-law, brother, etc.*	Age — *As of October 1, 1969*	Persons 6–24 years old: Is . . . attending or enrolled in school? *Circle* Y – *Yes* N – *No*	Persons 6–24 years old: *If "Yes"* – What grade (year)? *If "No"* – What is the highest grade (year) . . . ever attended?	Persons 6–24 years old: Did . . . finish this grade (year)?	Persons 14 years old and over: In the past 12 months how many weeks did . . . work either full- or part-time (not, counting work around the house)?	Persons 14 years old and over: If person worked at all in the past 12 months — In the weeks that . . . worked, how many hours did . . . usually work per week?	Persons 14 years old and over: If person worked at all in the past 12 months — What kind of work was . . . doing in the past 12 months? *If more than one, record the longest.*
68	69a	69b	69c	70	71	72	73	74	75
		239 Respondent							
		240		241 Y N		Y N	242		243
		244		245 Y N		Y N	246		247
		248		249 Y N		Y N	250		251
		252		253 Y N		Y N	254		255
		256		257 Y N		Y N	258		259
		260		261 Y N		Y N	262		263
		264		265 Y N		Y N	266		267
		268		269 Y N		Y N	270		271
		272		273 Y N		Y N	274		275
		276		277 Y N		Y N	278		279
		280		281 Y N		Y N	282		283
		284		285 Y N		Y N	286		287
		288		289 Y N		Y N	290		291
		292		293 Y N		Y N	294		295
		296		297 Y N		Y N	298		299
		300		301 Y N		Y N	302		303
		304		305 Y N		Y N	306		307
		308		309 Y N		Y N	310		311
		312		313 Y N		Y N	314		315
		316		317 Y N		Y N	318		319
		320		321 Y N		Y N	322		323
		324		325 Y N		Y N	326		327
		328		329 Y N		Y N	330		331

76. **When we last interviewed you, you mentioned** *(read names from item 83R on Information Sheet)* **as persons who will always know where you can be reached even if you moved away. Is this still true?** *(If so, verify the addresses and telephone numbers and enter below. If not, enter information about other persons who will know the respondent's whereabouts.)*

	Name	Relationship to respondent	Address	Telephone number
(1)				
(2)				

NONINTERVIEWS IN 1968

Ask the following questions of all respondents who were noninterviews in 1968. Transcribe the answers to the appropriate item on the Information Sheet, then proceed with the regular interview.

A. Were you attending or enrolled in regular school at this time last year?

1 ☐ Yes – *ASK B(1)*
2 ☐ No
3 ☐ In Armed Forces } *SKIP to B(2)*

B. (1) What grade were you attending at that time?
(2) What is the highest grade of regular school you have completed?

1 Elementary	1	2	3	4	5	6	7	8
2 High School	1	2	3	4				
3 College	1	2	3	4				

Transcribe entries to 77R

C. What were you doing at this time last year, working going to school, or something else?

1 ☐ Working
2 ☐ With a job, not at work } *ASK D and E*
3 ☐ Looking for work
4 ☐ Unable to work
5 ☐ In Armed Forces
6 ☐ Other – *Specify* _____

_____

_____

END OF QUESTIONS

Transcribe entries to 79R as follows:

1. Mark "Labor Force Group A" if box 1 or 2 is marked
2. Mark "Labor Force Group B" if box 3 is marked
3. Mark "Labor Force Group C" if box 6 is marked
4. Mark "Labor Force Group C – Armed Forces" if box 5 is marked
5. Mark "Unable to work" if box 4 is marked

D. For whom did you work?

_____

_____

E. What kind of work were you doing?

_____

_____

Transcribe entries to 81R

WHEN THE TRANSCRIPTION HAS BEEN COMPLETED, BEGIN THE REGULAR INTERVIEW WITH ITEM 1.

INFORMATION SHEET
DATA FROM 1967, 1968 INTERVIEWS

77R. Whether Respondent was attending or enrolled in school in 1968

(332)

1 ☐ Yes
2 ☐ No
3 ☐ In Armed Forces

Grade Respondent was attending OR Highest year of regular school completed:

(333)

0 ☐ None 0
1 ☐ Elem 1 2 3 4 5 6 7 8
2 ☐ High 1 2 3 4
3 ☐ College 1 2 3 4 5 6 7+

78R. Respondent's educational goal in 1968

☐ Not asked educational goal
☐ High 1 2 3 4
☐ College 2 4 6 7+

79R. Respondent's labor force status in 1968

(334)

1 ☐ Unable to work
2 ☐ Labor Force Group A
3 ☐ Labor Force Group B
4 ☐ Labor Force Group C
5 ☐ Labor Force Group C–Armed Forces

80R. Name of employer in 1967

_____

☐ Not employed in 1967

81R.

(1) Name of employer in 1968

_____

(2) Kind of work done

_____

(335)

☐☐☐

x ☐ Not employed in 1968

82R. Kind of work desired at age 30

_____

☐ Not asked in 1968

83R. Names and addresses of persons who will always know where Respondent can be reached:

1. _____

_____

_____

2. _____

_____